10425

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. ... RA-10-3-92

Registry No. ... H-10425

LOCALITY

State ... Alaska

General Locality ... Cross Sound

Sublocality ... Taylor Bay & Vicinity

1992

CHIEF OF PARTY
CAPT T.W. Richards

LIBRARY & ARCHIVES

DATE ... August 20, 1993

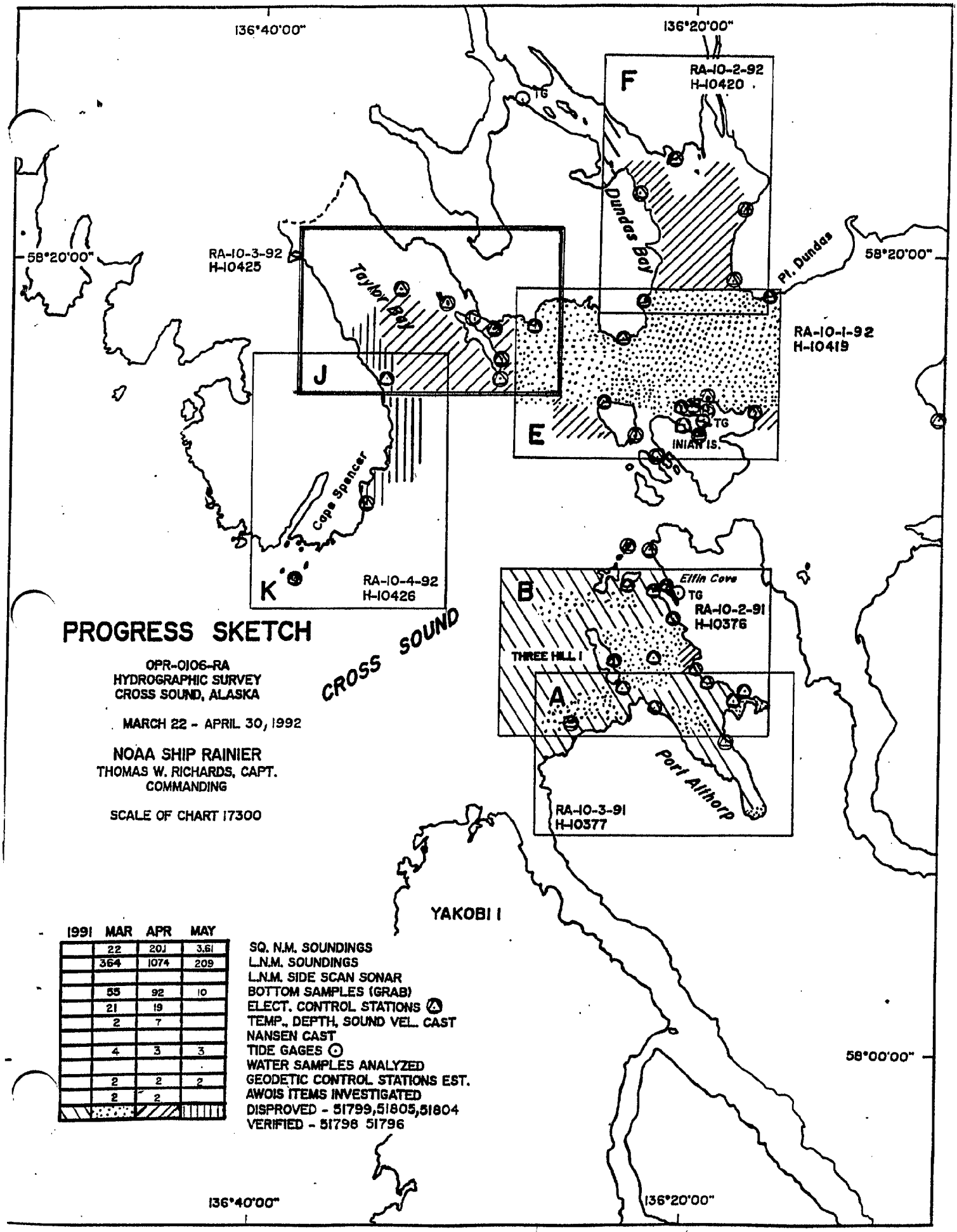
☆U.S. GOV. PRINTING OFFICE: 1987—756-980

P/L

P.20DS

CP8
17301
17302
17300
16760

10425



PROGRESS SKETCH

OPR-0106-RA
HYDROGRAPHIC SURVEY
CROSS SOUND, ALASKA

MARCH 22 - APRIL 30, 1992

NOAA SHIP RAINIER
THOMAS W. RICHARDS, CAPT.
COMMANDING

SCALE OF CHART 17300

1991	MAR	APR	MAY
	22	201	361
	364	1074	209
	55	92	10
	21	19	
	2	7	
	4	3	3
	2	2	2
	2	2	

SQ. N.M. SOUNDINGS
L.N.M. SOUNDINGS
L.N.M. SIDE SCAN SONAR
BOTTOM SAMPLES (GRAB)
ELECT. CONTROL STATIONS △
TEMP., DEPTH, SOUND VEL. CAST
NANSEN CAST
TIDE GAGES ⊙
WATER SAMPLES ANALYZED
GEODETIC CONTROL STATIONS EST.
AWOIS ITEMS INVESTIGATED
DISPROVED - 51799,51805,51804
VERIFIED - 51798 51796

NOAA FORM 77-28 (11-72) | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION | REGISTER NO. H-10425

HYDROGRAPHIC TITLE SHEET

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. RA-10-3-92

State: Alaska

General locality: Cross Sound

Locality: Taylor Bay

Scale: 1:10,000 Date of survey: 19 April - 09 May, 1992

Instructions dated: 18 February, 1992 Project No.: OPR-0106-RA

Vessel: NOAA Ship RAINIER (2120), (2123), (2124) (2125), (2126)

Chief of party: CAPT Thomas W. Richards, NOAA

Surveyed by: LT J. Waddell, LTJG E. Nelson, LTJG Lemke, LTJG Johnson, ENS Klay, ENS Ramon, ENS Pitts, ENS Appleton

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

Graphic record scaled by: RAINIER Personnel

Graphic record checked by: RAINIER Personnel

Verification by: M. Sanders, E. Domingo Automated plot by: PMC Xynetics Plotter

Evaluation by: C.R. Davies

Soundings in meters ~~fathoms~~ ~~feet~~ at ~~MLW~~ MLLW and decimeters

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

SURF/AWOLS 9/3/93 MCR

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

U.S. GOVERNMENT PRINTING OFFICE: 1986 - 652-007/41215

Descriptive Report to Accompany Hydrographic Survey H-10425

Field Number RA-10-3-92
Scale 1:10,000
April-May 1992

NOAA Ship RAINIER
Chief of Party: Captain Thomas W. Richards

A. PROJECT ✓

This basic hydrographic survey was completed in Cross Sound, southeastern Alaska, as specified by Project Instructions OPR-0106-RA dated February 18, 1992. This survey is designated Sheet J on the sheet layout dated June 1, 1990.

This survey is one in a series that will provide contemporary hydrographic data for updating existing charts and for planned larger scale chart coverage of the Cross Sound area. There have been numerous reports of shoals, rocks, and inaccurately charted depths and landmarks from the Southeastern Alaska Pilots' Association and NOAA field personnel. In 1959, the U.S. Coast and Geodetic Survey Ship PATTON reported that survey investigations in several areas revealed depths significantly shoaler than those charted. Troller fishermen have requested a detailed survey to aid in preventing the loss of trolling gear.

B. AREA SURVEYED ✓

The survey, located in southeastern Alaska, 60 NM west of Juneau, encompasses Taylor Bay and Fern Harbor. The survey limit is Lat. 58°16'~~30~~29"N to the south and Long. 136°26'30"W to the east. The northern and western limits are the mainland shoreline. Data acquisition was conducted from April 19 through May 09, 1992 (DN110 to DN130). See Eval Report, section I

This survey is entirely within Glacier Bay National Park and Preserve. Shorelines to the east and northeast are steep rocky slopes heavily wooded with dense undergrowth at the shore. Shorelines to the north and west are low, heavily wooded lands bordered by grassy marshes and shallow tidal flats. North of the sheet lies Brady Glacier. Most meltwater from the glacier flows into the northern portion of Taylor Bay, which has large sediment accumulations deposited by the outwash.

C. SURVEY VESSELS ✓

Data were acquired by NOAA Ship RAINIER's four automated survey launches as noted below:

Vessel	EDP No.	Operation

RA-3	2123	Hydrography Shoreline Verification
RA-4	2124	Hydrography Shoreline Verification
RA-5	2125	Hydrography Shoreline Verification Velocity Casts Bottom Samples
RA-6	2126	Hydrography Shoreline Verification

In addition to the survey vessels listed above, two 17' Boston Whalers, a 19' MonArk, and a 12' Zodiac were used to support operations for horizontal control and tide station installation/maintenance.

D. AUTOMATED DATA ACQUISITION AND PROCESSING ✓

Data acquisition and processing were accomplished with Hewlett-Packard (HP) 340C+ workstations and the following HDAPS programs:

Program Name	Version	Date Installed
SURVEY	6.10 / 6.11	9 Mar 92 / 15 Apr 92
POSTSUR	5.20 / 5.21	9 Mar 92 / 15 Apr 92
PLOTALL	2.01 / 2.02	9 Mar 92 / 15 Apr 92
POINT	2.04	9 Mar 92
BACKUP	2.00	20 Mar 91
CONVERT	3.02	9 Mar 92
PRINTOUT	3.00	9 Mar 92
DIAGNOSTIC	3.00	9 Mar 92
INVERSE	1.51	9 Mar 92
INSTALL	3.00	9 Mar 92
BASELINE	1.11 / 1.12	9 Mar 92 / 15 Apr 92
QUICK	1.10	20 Mar 91
LISTAWOIS	2.00 / 2.01	9 Mar 92 / 15 Apr 92
LOADNEW	1.50	9 Mar 92
REJECT	1.05	9 Mar 92
CARTO	2.01 / 2.02	9 Mar 92 / 15 Apr 92
Vers	NA	9 Mar 92 / 15 Apr 92
BACKOLD	1.12	9 Mar 92
NEWCONT	1.17	9 Mar 92
DISC_UTIL	1.00	20 Mar 91
MB	1.00	9 Mar 92
HJ	1.00	9 Mar 92
AUTOST	2.00	9 Mar 92
GLOBAL	1.12	9 Mar 92
MAKEFIX	1.02	9 Mar 92
BIGABST	1.60 / 2.00	9 Mar 92 / 15 Apr 92
REAPPLY	1.33	9 Mar 92
PREDICT	1.11	9 Mar 92
READPROJS	1.08	9 Mar 92
SOFTCHECK	1.12 / 1.13	9 Mar 92 / 15 Apr 92
HPRAZ	1.24	9 Mar 92
FILESYS	2.16	9 Mar 92

DP	1.12 / 2.00	9 Mar 92 / 15 Apr 92
MANU_DATA	1.12	9 Mar 92
RAMSAVER	1.00	20 Mar 91
GRAPHEDIT	NA	20 Mar 91
ZOOMEDIT	1.10	9 Mar 92
EXCESS	3.03 / 3.04	9 Mar 92 / 15 Apr 92
RECOMP	2.00	9 Mar 92
COPRINTOUT	1.00	9 Mar 92
DAS_SURV	6.20 / 6.21	9 Mar 92 / 15 Apr 92
UNIXSYS	2.00	15 Apr 92
SYMBOLS	1.00	15 Apr 92
CARTOTRANS	1.00	15 Apr 92

During spring of 1992, RAINIER personnel made necessary changes to SURVEY, MAKEFIX, and PLOTALL programs. The HDAPS office was notified of all changes, and written copies of the changes were forwarded to the HDAPS office.

On April 20, 1992, RAINIER launch OIC's began to have problems booting the survey program with correct C-O correctors and performing critical systems checks. The raw master printout (RMPO) showed the correct station number with the correct code, but the C-O corrector had not updated to the current code's value. Notification of the problem and sample data sets were sent to the HDAPS Office. On April 21, 1992, a new set of C-O tables were created for all launches and no further problems have been identified. On May 4, HDAPS Office identified the problem as having exceeded the maximum allowable entries in the C-O tables. HDAPS only recognized 60 entries and RAINIER's tables had as many as 72 entries. The creation of new C-O tables alleviated the problem. One data set in this survey used positioning control with incorrect C-O values. It is discussed in Section I. This problem was corrected during office processing.

Velocity corrections were determined using:

Program Name	Version	Date Installed
VELOCITY	1.11	09 Mar 1990

E. SONAR EQUIPMENT ✓

Not Applicable.

F. SOUNDING EQUIPMENT ✓

All survey launches were equipped with the Raytheon DSF-6000N echo sounders shown below. The echo sounders were operated in the HIGH + LOW (HIGH DIGITIZED) function, using manual gain controls on both high and low frequencies to obtain the best analog trace. Soundings were recorded in meters and tenths of meters. Six-meter bar checks were conducted and recorded daily, using both the LOW and the HIGH + LOW (HIGH DIGITIZED) functions. The echo sounders were operated in accordance with the Provisional Instructions "Raytheon DSF-6000N Echo-Sounder Operating and Processing Instructions", dated July 5, 1983, and the Field Procedures Manual for Hydrographic Surveying (FPM).

Raytheon DSF-6000N Echo Sounders

Vessel	Serial No.	DN
2123	B044N	119-129
2124	A103N	110-126
2125	B048N	111-130
2126	A117N	110-129

The echo sounders were continuously monitored during data acquisition. All sounding data were scanned at least two times, to ensure all significant peaks were inserted, and to verify the digitized depths. While running over steep or irregular areas, the echo sounders sometimes failed to track properly. Running at minimum speeds usually alleviated this problem, but marginal analog traces could not always be avoided. Data was analyzed during office processing and found to be consistent with the surrounding depth information.

G. CORRECTIONS TO ECHO SOUNDINGS✓

Corrections to echo soundings were determined for static draft, velocity of sound through water, and settlement and squat. Predicted tides were used for all plots. Sounding correctors apply to both narrow and wide beams of the DSF-6000N echo sounder. Supporting data and computations for all corrections to echo soundings are included in the Spring 1992 Corrections to Echo Sounding Data Package for OPR-O106-RA.

Offset Tables

Vessel	Offset Table No.
2123	2
2124	7
2125	8
2126	9

Sound Velocity✓

Correctors for the velocity of sound through water were determined from the casts listed below:

Velocity Table No.	Cast No.	Deepest Depth (m)	Applicable DN	Cast Position	Day
15	10	241.1	104-115	58°16'51"N 136°28'19"W	114
16	11	265.0	117-132	58°17'03"N 136°26'12"W	119

All sound velocity casts were acquired with a SBE SEACAT Profiler, S/N 811, which was calibrated at the Northwest Regional Calibration Center (NRCC) in Bellevue, WA, on March 3, 1992.

Velocity correctors were computed using the PC program VELOCITY in accordance with Hydrographic Survey Guideline (HSG) #69. A printout of the Sound Velocity Corrector Tables used in the HDAPS Post Survey program are included in the Spring 1992 Corrections to Echo Sounding Data Package for OPR-O106-RA.

Static Draft

For all launches, the distance from the transducer face to the gunwale was measured with a large metal square. Static draft measurements were then determined by dropping a lead line from the gunwale to the water and subtracting this distance from the distance measured with the square. The measurements from the gunwale to the waterline were conducted with the fuel tanks averaging 3/4 full and three people aboard. A transducer depth of 0.6 meter was determined for launches 2123, 2124, 2125, and 2126 on March 21-22, 1992. Transducer housings were replaced on launches 2123, 2124, and 2126; no significant change to static draft was noted.

Settlement and Squat

Settlement and squat correctors were determined in Shilshole Bay, WA, for launches 2123 on March 11, 2124 on March 16, and 2125 and 2126 on March 18, 1992. Tests were conducted over a hard bottom in depths well exceeding 7 times the vessels' drafts. Both sea and wind were calm. Observations were made through a Zeiss Ni2 leveling instrument, S/N 103453, to a rod held vertically on deck, directly over the transducer. Correctors were computed in accordance with Hydrographic Manual 4.9.4.2., using FPM Fig. 2.2 and 2.3, and are included in the Spring 1992 Corrections to Echo Sounding Data Package for OPR-O106-RA.

Heave

Corrections for heave were applied while scanning echograms. The scanning technique employed in comparing analog traces with the digital record eliminated significant fluctuations resulting from sea action.

Pneumatic Depth Gage

The 3D Instrument, Inc. Depth Gauge S/N 8504192N was calibrated by Pacific Operations Section on February 25, 1992. The depth gauge was calibrated against a Digiquartz 0-45 PSI Transducer #1107. In addition, field systems checks were performed via comparison with diver depth gages each time the pneumatic depth gage was used. Calibration data and correctors are included in the Spring 1992 Corrections to Echo Sounding Package for OPR-O106-RA.

Bar Check and Lead Lines

Bar check and lead lines were calibrated by RAINIER personnel on February 19, 1992 at PMC. Calibration forms are included in the Spring 1992 Corrections to Echo Sounding Data Package for OPR-O106-RA.

Tide Correctors

Tidal zoning and correctors applicable to predicted tides for the Sitka, Alaska, reference station (945-1600) were provided in the Project

Instructions. The time corrector for Sheet J is +0 hr. 00 min., while the range ratio is x1.13.

HDAPS listings of the data used in generating tide corrector tables are included in Appendix V* of this report.

A tide gage was installed and maintained by RAINIER personnel at Inian Cove, Inian Island (945-2629). The control station was Sitka, Alaska (945-1600). Opening levels at Sitka were completed by RAINIER personnel on March 27, 1992. Closing levels will be completed by Pacific Operations Section during summer 1992.

The station descriptions, field tide records, and Field Tide Notes have been forwarded to N/OES212 in accordance with HSG #50 and FPM 4.3. Requests for approved tides have been forwarded to N/OES2. Copies of the Field Tide Notes and the request for approved tides are included in Appendix V.* The approved tide note has been attached to this report.

H. CONTROL STATIONS See Eval Report, Section 2

Geographic positions for all control stations are based on the North American Datum of 1983 (NAD83) and the Geodetic Reference System 1980 Ellipsoid.

A listing of the geodetic stations used to control this survey is included in ~~Appendix III~~ this report.

Positions for all existing stations are from the NGS data base. All existing stations were recovered in accordance with methods stated in FPM 5.2.4. New stations were positioned via traverse methods to meet third-order class I standards. Further information can be found in the Spring 1991 and Spring 1992 Horizontal Control Report for OPR-0106-RA.

I. HYDROGRAPHIC POSITION CONTROL ✓

Method of Sounding Position Control ✓

Soundings, bottom samples, and detached positions were positioned using the Motorola Mini Ranger Falcon 484 microwave system in multi-range and range-azimuth modes.

Accuracy Requirements/Problems ✓

Accuracy requirements specified in the Hydrographic Manual and in FPM 3.1.3.1 were generally met. When maximum residuals exceeded the specified limits, OIC's deselected the station(s) with the highest residual value and continued hydrography. Occasionally, ECR's and maximum residuals exceeded the specified limits. When this happened, the data were usually rejected and the area re-run with different control. If maximum residuals exceeded tolerances, they were flagged and reviewed. Data between adjacent good positions were smoothed when maximum residuals showed unusual accelerations off the expected track.

The loss of one or more LOP's frequently occurred when collecting data close inshore. If this loss generated high ECR's and/or maximum residuals, the OIC's annotated the raw master printout (RMPO). If the data plotted on track and sounding intervals appeared correct based upon

* Filed with the hydrographic data.

time and course steered, the data were retained. Some data were acquired with only two LOP's because stations were blocked or deselected. When this occurred critical system checks were acquired nearby where three LOP's were available. Data was analyzed during office processing and found to be consistent with surrounding depths and photogrammetric data. Range-azimuth accuracy requirements were met in accordance with Section 4.4.4 of the Hydrographic Manual. The R/T unit of the sounding vessel was the target for observed azimuths. All angles were read to the nearest minute of arc or better for a positional accuracy of 0.5 mm at this survey scale.

Equipment ✓

A Wild T-2 theodolite was used for range-azimuth observations. Serial numbers for R/T units and RPU's are annotated on the RMPO for each day of hydrography. Lists of all electronic equipment serial numbers are included in the Electronic Control Data Package (Spring 1992).

Calibrations & Systems Check Methods ✓

Baseline calibrations were conducted in accordance with FPM 3.1.2.1 and 3.1.3.2. On February 13-14, 1992 (DN044-DN045), and on February 25-26, 1992 (DN056-DN057) calibrations were conducted at the SANDPOINT BASELINE over a published distance of 1058.1876 m. Calibration data and a description of the baseline is included in the Spring 1992 Electronic Control Data Package.

In accordance with FPM 3.1.3.3, formal system checks were not documented for multiple LOP hydrography. Data collected with two LOP's were always bracketed by multiple LOP data acquired with ECR's and maximum residuals within acceptable limits to serve as critical system checks. Static critical systems checks were performed in accordance with Section 3.1.3.3. of the Field Procedures Manual when multiple LOP system checks were not possible.

Other Factors ✓

Antenna offset and layback correctors were applied via HDAPS offset tables, and are found in the separates* included with the survey data.

Incorrect C-O values were called up in the HDAPS survey program on DN110. Four DP's (Pos. 4004-4007) and six lines (Pos. 4017-4086) were run with a C-O value of 0.00 instead of 6.88 on shore station 2. No critical features were positioned with the incorrect values. These positions have not been corrected. The above positions were recomputed during office processing with the correct C-O value.

J. SHORELINE See Evac Report, section 2

Shoreline detail was transferred to the final sheets from shoreline maps TP-01327, TP-01328, TP-01329, TP-01330 (June 1985-photography, 1:20,000, NAD27). Chart 17302 (1:10,000 enlargement, 1989) was used to augment the existing registered shoreline manuscripts. The charted shoreline details were included to verify or disprove all charted features. The shoreline maps were the only source for shoreline on the smooth sheet. Shoreline verification was conducted near mean lower low water in accordance with FPM 7.1. Shoreline verification was accomplished by

* Filed with the hydrographic data

assigning sequential reference numbers and taking detached positions (DPs) as explained later in this section.

Inshore hydrography shows that photogrammetric and hydrographic positioning are in good agreement. *concur*

Shoreline and T-sheet features verified via visual inspection were assigned sequential reference numbers and were recorded in the field using sounding volumes and corresponding 1:10,000 photocopies of the T-sheet. Reference numbers, descriptions, and heights corrected to MLLW using predicted tides, are recorded in the sounding volumes. Corresponding notes were annotated on the photocopies of the T-sheet. The annotated photocopies of the T-sheet are attached to the sounding volumes which are included with the survey data.

DPs taken during shoreline verification were recorded on the master printouts and indicate significant features, features not found on the T-sheet, and locations of disprovals. Where possible, positions of some T-sheet features were verified during inshore mainscheme hydrography and annotated on the master printouts.

T-sheet features which were verified were retained and shown on the final field sheets (FFS). Verified shoreline and new features are shown in black on the FFS, changes to the shoreline are shown in red, and unverified shoreline is shown in blue. *All shoreline is drawn in red on black on smooth sheet.*

Detailed 1:10,000-scale paper plots showing all DPs and reference numbers and notes relating to each feature are included with the sheets submitted with this survey. All DPs were plotted using the "+" symbol because the majority of DPs describe features that are offset slightly from the DP. To accurately depict features, the offset and bearing of the feature from the DP were applied and the feature drawn by hand. Position numbers for all DPs are plotted on the two DP overlays along with a brief description of the DP. Heights are recorded in meters and are corrected to predicted MLLW.

Rough surf prevented sounding near portions of Taylor Island's west and south shores.

Disprovals ✓

The following disprovals were conducted near predicted lower low water. A visual and echosounder search was conducted for each item lasting from ten to fifteen minutes. Positioning was accomplished by using two or more ranges from Falcon Mini-Rangers with ECRs and maximum residuals within acceptable limits for a 1:10,000 scale survey.

The group of nine T-sheet rocks in the vicinity of 58°18'29.0"N, 136°27'14.0"W was inspected (Ref. No. R6-5, Pos. Nos. 6004, 6005, 6006, 8010) and the rocks were not seen. Water visibility was 1.5 meters. Isolated kelp heads were seen in the area. *Kelp symbols are drawn on the smooth sheet in this area.*

The vicinity of the T-sheet submerged rock at 58°18'01.0^{33}"N, 136°28'27.6^{23}"W was inspected (Pos. No. 6008) and the rock was not seen. Water visibility was 1.5 meters. The search radius was 50 meters from the DP.

The vicinity of the T-sheet rock at 58°18'22.~~0~~21"N, 136°27'12.~~0~~2"W was inspected (Pos. No. 8013) and the rock was not seen. Water visibility was 1.5 meters. The search radius was 25 meters from the DP. Kelp was seen in the area. Kelp symbol is drawn on the smooth sheet in this area.

The vicinity of the T-sheet rock at 58°18'2~~1~~0.0"N, 136°27'1~~3~~2.~~0~~94"W was inspected (Pos. No. 8014) and the rock was not seen. Water visibility was 1.5 meters. The search radius was 25 meters from the DP. Kelp was seen in the area. Kelp symbol is drawn on the smooth sheet in this area

The vicinity of the T-sheet rock at 58°18'22.~~5~~13"N, 136°28'02.~~0~~29"W was inspected (Pos. No. 6563) and the rock was not seen. Water visibility was 1.0 meters. The search radius was 15 meters from the DP. Kelp was seen in the area. Kelp symbol is drawn on the smooth sheet in this area.

The vicinity of the T-sheet rock at 58°18'22.~~0~~159"N, 136°28'07.~~5~~87"W was inspected (Pos. No. 6567) and the rock was not seen. Water visibility was 1.0 meters. The search radius was 15 meters from the DP. Kelp was seen in the area. Kelp symbol is drawn on the smooth sheet in this area.

The vicinity of the T-sheet rock at 58°18'18.~~5~~49"N, 136°28'0~~3~~4.60"W was inspected (Pos. No. 6566) and the rock was not seen. Water visibility was 1.0 meters. The search radius was 15 meters from the DP. Kelp was seen in the area. Kelp symbol is drawn on the smooth sheet in this area.

The vicinity of the T-sheet rock at 58°18'22.~~5~~16"N, 136°28'2~~5~~4.81"W was inspected (Pos. No. 6570) and the rock was not seen. Water visibility was 1.0 meters. The search radius was 15 meters from the DP. Kelp was seen in the area. Kelp symbol is drawn on the smooth sheet in this area.

The vicinity of the T-sheet rock at 58°18'11.~~0~~49"N, 136°28'4~~5~~4.95"W was inspected (Pos. No. 6836) and the rock was not seen. Water visibility was 1.0 meters. The search radius was 100 meters from the DP. Kelp was seen in the area. Kelp symbol is drawn on the smooth sheet in this area.

The vicinity of the T-sheet rock at 58°18'0~~9~~8.80"N, 136°28'4~~4~~3.90"W was inspected (Pos. No. 6837) and the rock was not seen. Water visibility was 1.0 meters. The search radius was 100 meters from the DP.

The vicinity of the T-sheet rock at 58°18'08.~~5~~25"N, 136°28'~~43~~39.24"W was inspected (Pos. No. 6838) and the rock was not seen. Water visibility was 1.0 meters. The search radius was 100 meters from the DP.

The vicinity of the T-sheet rock at 58°18'03.~~0~~21"N, 136°29'59.~~0~~62"W was inspected (Pos. No. 4004) and the rock was not seen. Water visibility was 1.7 meters. The search radius was 40 meters from the DP.

The vicinity of the T-sheet rock at 58°17'16~~.5~~5.98"N, 136°28'~~49.5~~50.52"W was inspected (Pos. No. 4002) and the rock was not seen. Water visibility was 1.5 meters. The search radius was 20 meters from the DP. Kelp was seen in the area. Kelp symbol is drawn on the smooth sheet in this area.

Recommendation: The hydrographer recommends that details seaward of the HWL from this survey be used to supersede TP-01327, TP-01328, TP-01329, and TP-01330 in the common area. Concur

New Features

The following are significant new features found during shoreline verification near mean lower low water. The following features are located in navigable areas and were not depicted on the T-sheet. All new features are as shown on the ~~FFS~~ SS.

Position No. 6840 describes a ~~submerged~~ rock at 58°~~18~~17'~~00~~94" N, 136°27'~~18~~17.54" W which is covered 0.5m at MLLW.

Position No. 6839 describes a ~~submerged~~ rock at 58°17'57.03" N, 136°27'~~17~~6.84" W which is ~~covered 0.1m~~ awash at MLLW.

Position No. 8018 describes a ~~submerged~~ rock at 58°17'~~56~~5.80" N, 136°27'25~~"~~4.40 W which is ~~covered, 0.1m~~ awash at MLLW.

Position Nos. 6328 and 6683 describe a reef at 58°16'~~52~~1.11" N, 136°29'~~18~~5.59" W which is ~~awash~~ uncovers 0.3m at MLLW.

Position No. 6679 describes a ~~submerged~~ rock at 58°17'~~12~~08.88" N, 136°29'42~~"~~.17 W which is ~~covered~~ Submerged 1.3~~m~~ at MLLW.

Position No. 4570 describes a rock at 58°18'45~~"~~4.77 N, 136°31'39~~"~~.17 W which ~~bares~~ uncovers 0.~~4~~6m at MLLW.

Position No. 4438 describes a rock at 58°16'~~56~~5.76" N, 136°33'~~46~~5.28" W which ~~is awash~~ uncovers 0.2m at MLLW.

Recommendation: The hydrographer recommends that shoreline detail from this survey be used to supersede prior shoreline information. Concur

Unverified Features

The T-sheet rock at 58°18'16.5"N, 136°27'13.0" was not verified.

Recommendation: The hydrographer recommends that this feature be charted as shown on T-sheet. Do not concur, chart rock as shown on smooth sheet.

AWOIS Items

AWOIS item 51794 was investigated with a 500 meter radius echo sounder search. Line spacing was 25m over an average water depth of 35m. The shoalest depth was ~~21.1~~24.6m, at the northern (shoreward) edge of the search radius.

Recommendation: The hydrographer recommends that the reported 9 fathom shoal at 58°18'1~~2~~4"N, 136°32'3~~3~~0"W be deleted from the chart. Concur

K. CROSSLINES✓

A total of 10.45 nautical miles of crosslines were run perpendicular to mainscheme lines, representing 8.2% of the mainscheme hydrography; this percentage does not reflect additional splits or developments run during additional investigations.

Crossline soundings agree to within 2.0 meters with mainscheme soundings. These differences are believed to be attributable to differences between real and predicted tides. Tidal influence is also

evident in depth curves of mainscheme hydrography collected on different days. No significant differences after smooth tides were applied.

The vessels acquiring crossline data did not always acquire the corresponding mainscheme data. Agreement between soundings acquired by different echo sounders in a common area is as stated above.

L. JUNCTIONS See Evac Report, section 5

This survey junctions with H-10419 (1:10,000, 1992) to the east, and H-10426 (1:10,000, 1992) and H-10374 (1:20,000, 1991) to the south. No irregularities were found when comparing soundings and depth curves. Agreement between overlapping soundings agree to within 2.0 meters. The difference in junction values may reflect the variation between real and predicted tides, steep slopes, and the extended period between surveys.

M. COMPARISON WITH PRIOR SURVEYS See Evac Report, section 6

H-2558 (1:40,000; 1901)

Comparison of Sounding Features

Overall agreement between this survey and H-2558 is poor, with discrepancies as noted below. The most probable causes for the discrepancies is the isostatic rebound, sedimentation, and inaccuracies in the sounding or positioning techniques used on the prior survey.

A north-south channel exists in Taylor Bay on the present survey that is not evident on the prior survey. Prior soundings toward the north end of the bay are up to 47 meters deeper than present soundings, except in the channel where some prior soundings are up to 10 meters shoaler. Prior soundings in the eastern portion of Taylor Bay are up to 20 meters deeper, and those in the western portion are up to 10 meters deeper. Prior soundings near the south end of Taylor Bay are up to ~~70~~ 85 meters shoaler in deep portions of the channel. Prior soundings in Fern Harbor are approximately equal, except one sounding which was 25 meters deeper.

Recommendation: The hydrographer recommends sounding data from the present survey be used to supersede that of H-2558 within their common areas. concur

N. COMPARISON WITH THE CHART See Evac Report, section 7

The hydrographer compared the features from NOS chart 17302, 15th* Edition, May 20/89, 1:80,000 (NAD83) to this survey. Overall agreement of sounding features is good. When overlain with the T-sheet, the charted shoreline is offset from the T-sheet shoreline by as much as 200m. * 16th Edition was used for comparison. Shoreline on the 16th Edition has been updated to reflect recent photography.

Comparison of Sounding Features ✓

A majority of charted soundings were approximately equal to soundings from the present survey. Some soundings in northern Taylor Bay are up to ~~10~~ 47 meters deeper than the present survey, while others in central Taylor Bay range from 15-85 meters deeper.

Comparison of Non-Sounding Features ✓

The vicinity of the charted rock at 58°16'50"N, 136°33'17"W was inspected (Pos. No. 4442) and the rock was not seen. The hydrographer believes that the charted rock is the new feature at position No. 4441. concur
The new rock is a lat. 58/16/46.92 N, long. 136/33/08.14 W

The vicinity of the charted rock at 58°17'01"N, 136°28'~~50~~49"W was inspected (Pos. No. 6019) and the rock was not seen. The hydrographer * believes that the charted rock is T-sheet position R4-3 at lat. 58/17/02.5 N) concur
long. 136/28/48.0 W

The vicinity of the charted islet at 58°17'07"N, 136°28'47"W was inspected (Pos. No. 6018) and the islet was not seen. The hydrographer * believes that the charted islet is T-sheet islet at position No. 4000. Concur
This islet was located at lat. 58/17/08.77 N, long. 136/28/42.23 W (dashed red).

The vicinity of the charted rock at 58°17'07"N, 136°28'42"W was inspected (Pos. No. 6017) and the rock was not seen. The hydrographer believes that the charted rock is T-sheet ~~rock~~ islet at position No. 4000 at concur
lat. 58/17/08.77 N, long. 136/28/42.23 W. The charted rock now defines the eastermost portion of the islet as discussed in the previous paragraph and defined by position number 4000.

The vicinity of the charted rock at 58°18'05"N, 136°29'13"W was inspected (Pos. No. 6016) and the rock was not seen. The hydrographer * believes that the charted rock is T-sheet position R4-24 and this rock is concur
located at lat. 58/18/06.0 N, long. 136/29/15.5 W.

The vicinity of the charted islets at 58°18'02"N, 136°29'13"W was inspected (Pos. No. 6012) and the islet was not seen. The hydrographer * believes that the charted islets ~~is~~ are T-sheet position R4-23 and are located at concur
lat. 58/18/01 N, lat. 58/18/03 N, and long. 136/29/08 W.

The vicinity of the charted rock at 58°17'58"N, 136°29'06"W was inspected (Pos. No. 6011) and the rock was not seen. The hydrographer * believes that the charted rock is T-sheet position R4-26 and is located at lat. concur
58/17/58 N, long. 136/29/01 W.

The vicinity of the charted islets at 58°18'11"N, 136°28'52"W ~~was~~ are inspected (Pos. No. 6010) and the islet was not seen. The hydrographer believes that the charted islet is T-sheet position R4-32. Kelp was concur
seen in the area. These islets are located at lat. 58/18/13 N, long. 136/28/49 W. Kelp
Symbol is drawn on the smooth sheet in this area.

The vicinity of the charted rock at 58°18'02"N, 136°28'37"W was inspected (Pos. No. 6009) and the rock was not seen. The hydrographer * concur
believes that the charted rock is T-sheet position ~~R4-31~~ 4011 at lat. 58/18/02 N, long. 136/28/40 W.

The vicinity of the charted rock at 58°18'37"N, 136°26'55"W was inspected (Pos. No. 6007) and the rock was not seen. The hydrographer * believes that the charted rock is T-sheet position R6-1. Kelp was seen concur
in the area. The T-sheet rock is located at lat. 58/18/36 N, long. 136/26/51 W.

The vicinity of the charted islet at 58°18'20"N, 136°27'12"W was inspected (Pos. No. 6003) and the islet was not seen. The hydrographer * believes that the charted islet is T-sheet position R6-~~4~~7. This T-Sheet Islet concur
Is located at lat. 58/18/19 N, long. 136/27/13 W

The vicinity of the charted islet at 58°18'08"N, 136°27'16"W was inspected (Pos. No. 6002) and the islet was not seen. The hydrographer believes that the charted islet is T-sheet position R6-11 and located at concur
lat. 58/18 109 N, long. 136/27/10 W.

The vicinity of the charted islet at 58°17'50"N, 136°27'08"W was inspected (Pos. No. 6001) and the islet was not seen. The hydrographer * believes that the charted islet is T-sheet position R6-~~17~~8 and the T-Sheet island is concur
at lat 58/17/51 N, long. 136/27/03 W.

* Hydrographer did not account for datum shift and offset between the shoreline map and the chart. Feature(s) exist as charted but have been located using better positioning methods.

The vicinity of the charted islet at 58°17'44"N, 136°27'09"W was inspected (Pos. No. 6000) and the islet was not seen. The hydrographer believes that the charted islet is T-sheet position R6-17 and it is located at lat. 58/17/41N, long. 136/27/03W. * concur

The vicinity of the charted rock at 58°18'15"N, 136°28'13"W was inspected (Pos. No. 6561) and the rock was not seen. The hydrographer believes that the charted rock is T-sheet position R5-3. Kelp was seen in the area. The east and west limits of an offshore reef centered at lat. 58/18/16N, long. 136/28/07W, were defined by detached positions. Kelp symbol is drawn in the area on the smooth sheet. Refer to the smooth sheet for portrayal of this feature. * concur

The vicinity of the charted rock at 58°18'~~20~~16"N, 136°28'42"W was inspected (Pos. No. 6685) and the rock was not seen. The hydrographer believes that the charted rock is ~~T-sheet~~ position ~~R4-37~~ 6684 at lat. 58/18/13N, long. 136/28/39W. concur

Recommendation: The hydrographer recommends data from the present survey be used to supersede all non-sounding features on the chart. concur

Dangers to Navigation ✓

Three dangers to navigation within the limits of this survey were reported by radio message and letter to the Seventeenth Coast Guard District and DMAHTC. Copies of the correspondence are included in ~~Appendix I of~~ this report. Position numbers associated with each reported danger are included on the copy of the radio message. Two additional dangers were found during office processing, letters are attached to this report and one revision

O. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede the areas common to the prior surveys listed in Section 6.10 of the Project Instructions. concur

P. AIDS TO NAVIGATION ✓

No aids to navigation lie within the limits of the survey. Concur

There are no floating aids to navigation, bridges, overhead cables, submerged pipelines, or ferry routes within the limits of the survey. Concur

Q. STATISTICS ✓

Vessel:	2120	2123	2124	2125	RA-6	Total
# of Pos	0	660	661	1008	208	~~2537~~ 2408
NM Hydro 0	80.61	69.85	118.98	32.82	302.26	

NM^2 Hydrography	4.8	Velocity Casts	3
Detached Positions	121	Tide Stations	1
Reference Numbers	127		
Bottom Samples	36		

R. MISCELLANEOUS ✓

Loran C comparisons were sent to DMAHTC and U.S. Coast Guard in accordance with the project instructions.

All bottom samples were submitted to the Smithsonian Institution.

* Hydrographer did not account for datum shift and offset between the shoreline map and the chart. Feature(s) exist as charted but have been located using better positioning methods.

S. RECOMMENDATIONS ✓

The hydrographer recommends that future charts of the area between the eastern shore of Lemesurier Island and Cape Spencer be no smaller than 1:50,000 due to the complexity of the area. The area of Fern Harbor located on this survey is particularly in need of charting at 1:50,000 or larger scale.

T. REFERRAL TO REPORTS ✓

The following supplemental reports contain additional information relevant to this survey:

Title	Date Sent to N/CG245
Spring 1992 Horizontal Control Report for OPR-O106-RA	June 1992
Spring 1992 Electronic Control Data Package for OPR-O106-RA	June 1992
Spring 1992 Corrections to Echo Soundings Data Package for OPR-O106-RA	June 1992
Spring 1992 Coast Pilot Report for OPR-O106-RA	June 1992
Spring 1992 User Evaluation Report for OPR-O106-RA	July 1992

Respectfully Submitted,

Jonathan M. Klay
Ensign, NOAA

Approved and Forwarded,

Thomas W. Richards
Captain, NOAA
Commanding Officer

VKRL

CONTROL STATIONS as of 21 Jun 1992

MAR 2 1993

No	Type	Latitude	Longitude	H	Cart	Freq	Vel	Code	MM/DD/YY	Station Name	Quad No's
~~123~~	~~F~~	~~058:21:36.578~~	~~136:22:40.172~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~	~~5~~	~~04/22/92~~	~~DELTA 1985~~	
~~112~~	~~F~~	~~058:11:41.777~~	~~136:20:55.983~~	~~3~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~WHARF~~	
~~159~~	~~F~~	~~058:22:45.029~~	~~136:24:36.049~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~CANYC(ADJ)~~	
135	F	058:11:51.574	136:38:27.489	16	250	0.0	0.0	1	03/22/92	CAPE 1925	581363✓
108	F	058:16:48.210	136:34:30.689	8	250	0.0	0.0	6	04/22/92	MURAIN 1985	581363✓
153	F	058:08:18.190	136:25:21.164	27	250	0.0	0.0	4	04/23/92	RAIN 1991	581362✓
~~187~~	~~F~~	~~058:10:58.916~~	~~136:20:46.250~~	~~7~~	~~250~~	~~0.0~~	~~0.0~~	~~9~~	~~04/22/92~~	~~ISLE NO 1 1938~~	
~~165~~	~~F~~	~~058:23:11.568~~	~~136:24:59.403~~	~~3~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~LEG(ADJ)~~	
~~166~~	~~F~~	~~058:23:50.735~~	~~136:25:25.253~~	~~2~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~HIRE(ADJ)~~	
~~167~~	~~F~~	~~058:22:07.672~~	~~136:23:53.456~~	~~3~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~NEEDLE(ADJ)~~	
~~189~~	~~F~~	~~058:08:47.315~~	~~136:17:34.407~~	~~5~~	~~250~~	~~0.0~~	~~0.0~~	~~A~~	~~04/07/92~~	~~HIP 1992~~	
190	F	058:17:51.075	136:27:03.058	9	250	0.0	0.0	0	04/15/92	LUMBER 1991	581362✓
~~284~~	~~Z~~	~~058:08:52.207~~	~~136:17:35.478~~	~~7~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~POCKET(R/AZ)~~	
~~217~~	~~Z~~	~~058:09:16.155~~	~~136:19:07.423~~	~~5~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~BOW(R/AZ)~~	
~~173~~	~~F~~	~~058:22:11.340~~	~~136:21:07.733~~	~~5~~	~~250~~	~~0.0~~	~~0.0~~	~~A~~	~~04/22/92~~	~~MUCK 1991~~	
191	F	058:16:20.937	136:24:00.922	18	250	0.0	0.0	B	04/30/92	ACHE 1901	581362✓
~~175~~	~~F~~	~~058:21:48.838~~	~~136:23:58.304~~	~~2~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~HOOK 1991(ADJ)~~	
~~192~~	~~F~~	~~058:17:03.768~~	~~136:15:34.968~~	~~6~~	~~250~~	~~0.0~~	~~0.0~~	~~2~~	~~04/14/92~~	~~AID 1901~~	
193	F	058:17:50.935	136:23:07.344	27	250	0.0	0.0	7	05/08/92	BALD 1901	581362✓
~~194~~	~~F~~	~~058:16:08.427~~	~~136:16:52.405~~	~~8~~	~~250~~	~~0.0~~	~~0.0~~	~~7~~	~~04/30/92~~	~~INIAN 1990~~	
~~195~~	~~F~~	~~058:18:48.354~~	~~136:22:09.805~~	~~7~~	~~250~~	~~0.0~~	~~0.0~~	~~7~~	~~03/30/92~~	~~JAB 1991~~	
196	F	058:16:04.118	136:20:28.242	10	250	0.0	0.0	B	05/08/92	NATTY 1991	581362✓
~~100~~	~~F~~	~~058:15:48.046~~	~~136:07:57.536~~	~~8~~	~~250~~	~~0.0~~	~~0.0~~	~~4~~	~~04/16/92~~	~~YAK 1901~~	
~~223~~	~~Z~~	~~058:21:36.578~~	~~136:22:40.172~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~DELTA(R/AZ)~~	
~~197~~	~~F~~	~~058:16:21.417~~	~~136:19:13.944~~	~~6~~	~~250~~	~~0.0~~	~~0.0~~	~~7~~	~~04/30/92~~	~~BAIL 1991~~	
~~259~~	~~Z~~	~~058:22:45.029~~	~~136:24:36.049~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~CONIC(R/AZ)~~	
~~115~~	~~F~~	~~058:20:02.107~~	~~136:18:17.253~~	~~8~~	~~250~~	~~0.0~~	~~0.0~~	~~1~~	~~05/05/92~~	~~BAN 1901~~	
~~198~~	~~F~~	~~058:16:12.143~~	~~136:20:05.798~~	~~5~~	~~250~~	~~0.0~~	~~0.0~~	~~4~~	~~04/21/92~~	~~LOUT 1991~~	
~~199~~	~~F~~	~~058:15:31.561~~	~~136:19:34.548~~	~~6~~	~~250~~	~~0.0~~	~~0.0~~	~~6~~	~~04/17/92~~	~~SHAKE 1992~~	
~~400~~	~~F~~	~~058:15:47.821~~	~~136:19:32.367~~	~~2~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~INIAN COVE B 1964~~	
~~265~~	~~Z~~	~~058:23:11.968~~	~~136:24:59.403~~	~~5~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~LEG(R/AZ)~~	
~~266~~	~~Z~~	~~058:23:50.735~~	~~136:25:25.253~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~HIRE(R/AZ)~~	
~~267~~	~~Z~~	~~058:22:07.672~~	~~136:23:53.456~~	~~5~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~NEEDLE(R/AZ)~~	
~~122~~	~~F~~	~~058:21:04.673~~	~~136:17:37.174~~	~~8~~	~~250~~	~~0.0~~	~~0.0~~	~~4~~	~~04/22/92~~	~~DEED 1901 1966~~	
~~401~~	~~F~~	~~058:15:45.433~~	~~136:20:28.213~~	~~6~~	~~250~~	~~0.0~~	~~0.0~~	~~A~~	~~04/08/92~~	~~BAKE 1991~~	
~~402~~	~~Z~~	~~058:15:45.433~~	~~136:20:28.213~~	~~6~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~BAKE(R/AZ)~~	
~~403~~	~~Z~~	~~058:15:31.561~~	~~136:19:34.548~~	~~6~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~SHAKE(R/AZ)~~	
~~273~~	~~Z~~	~~058:22:11.340~~	~~136:21:07.733~~	~~5~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~MUCK(R/AZ)~~	
~~404~~	~~Z~~	~~058:15:47.821~~	~~136:19:32.367~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~INIAN COVE B 1964(R/AZ)~~	
~~275~~	~~Z~~	~~058:21:48.838~~	~~136:23:58.304~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~HOOK 1991(R/AZ)~~	
~~289~~	~~Z~~	~~058:08:47.315~~	~~136:17:34.407~~	~~5~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~HIP(R/AZ)~~	
~~405~~	~~Z~~	~~058:16:12.143~~	~~136:20:05.798~~	~~5~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~LOUT(R/AZ)~~	
~~406~~	~~Z~~	~~058:16:11.778~~	~~136:19:08.839~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~JUJU(R/AZ)~~	
~~407~~	~~F~~	~~058:16:11.778~~	~~136:19:08.839~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~	~~A~~	~~05/01/92~~	~~JUJU 1992~~	
~~408~~	~~Z~~	~~058:20:02.107~~	~~136:18:17.253~~	~~8~~	~~250~~	~~0.0~~	~~0.0~~		~~04/14/92~~	~~BAN 1901~~	
~~409~~	~~Z~~	~~058:18:48.354~~	~~136:22:09.805~~	~~7~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~JAB(R/AZ)~~	
~~410~~	~~Z~~	~~058:17:50.935~~	~~136:23:07.344~~	~~27~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~BALD(R/AZ)~~	
~~411~~	~~Z~~	~~058:16:21.417~~	~~136:19:13.944~~	~~6~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~BAIL(R/AZ)~~	
~~412~~	~~F~~	~~058:15:38.643~~	~~136:22:27.396~~	~~7~~	~~250~~	~~0.0~~	~~0.0~~	~~A~~	~~05/01/92~~	~~HYENA 1991~~	
~~413~~	~~F~~	~~058:16:55.107~~	~~136:28:47.710~~	~~20~~	~~250~~	~~0.0~~	~~0.0~~		~~04/19/92~~	~~END 2~~	
414	F	058:18:41.982	136:31:10.409	13	250	0.0	0.0	2	04/22/92	TAYLOR 1985	581363✓
415	F	058:18:31.239	136:30:34.884	5	250	0.0	0.0	A	04/29/92	LOBO 1991	581363✓
416	F	058:12:43.819	136:22:51.081	9	250	0.0	0.0	5	04/23/92	ADZE 1901	581362✓
417	F	058:17:59.613	136:29:08.752	4	250	0.0	0.0	A	05/06/92	DEPT 1991	581362✓
418	Z	058:18:31.239	136:30:34.884	5	250	0.0	0.0		00/00/00	LOBO(R/AZ)	581363✓
~~419~~	~~F~~	~~058:15:04.557~~	~~136:21:48.256~~	~~3~~	~~250~~	~~0.0~~	~~0.0~~	~~A~~	~~05/01/92~~	~~EMBO 1991~~	
~~106~~	~~F~~	~~058:11:41.367~~	~~136:21:06.313~~	~~7~~	~~250~~	~~0.0~~	~~0.0~~	~~7~~	~~03/22/92~~	~~FINN 1938~~	
~~107~~	~~F~~	~~058:11:29.612~~	~~136:20:36.947~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~CHICH~~	
~~108~~	~~F~~	~~058:11:10.609~~	~~136:20:21.268~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~	~~KOFF NB 1~~	

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~~133~~	~~F~~	~~058:15:15.230~~	~~136:23:02.253~~	~~15~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~SUR~~	
~~136~~	~~F~~	~~058:11:49.673~~	~~136:20:50.459~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~SKY~~	
~~141~~	~~F~~	~~058:14:14.254~~	~~136:21:47.078~~	~~1~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~URSA~~	
~~206~~	~~Z~~	~~058:11:41.367~~	~~136:21:06.317~~	~~7~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~FINN(R/AZ)~~	
~~207~~	~~Z~~	~~058:11:29.612~~	~~136:20:36.949~~	~~6~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~CHICH(R/AZ)~~	
~~208~~	~~Z~~	~~058:11:18.689~~	~~136:20:21.268~~	~~6~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~KOFF-NO 1(R/AZ)~~	
~~214~~	~~Z~~	~~058:15:02.304~~	~~136:21:18.505~~	~~6~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~CANAL(R/AZ)~~	
~~233~~	~~Z~~	~~058:15:15.230~~	~~136:23:02.253~~	~~15~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~SUR(R/AZ)~~	
~~236~~	~~Z~~	~~058:11:49.677~~	~~136:20:50.449~~	~~6~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~SKY(R/AZ)~~	
~~241~~	~~Z~~	~~058:14:14.254~~	~~136:21:47.078~~	~~3~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~URSA(R/AZ)~~	
~~420~~	~~Z~~	~~058:15:04.557~~	~~136:21:48.256~~	~~3~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~EMBO(R/AZ)~~	
~~421~~	~~Z~~	~~058:15:38.643~~	~~136:22:27.396~~	~~7~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~HYENA(R/AZ)~~	
~~117~~	~~F~~	~~058:09:16.155~~	~~136:19:07.423~~	~~5~~	~~250~~	~~0.0~~	~~0.0~~	~~6 04/20/92~~	~~BOW 1942~~	
~~134~~	~~F~~	~~058:07:28.094~~	~~136:18:51.778~~	~~3~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~TOWN 1942~~	
~~139~~	~~F~~	~~058:09:58.282~~	~~136:21:33.918~~	~~7~~	~~250~~	~~0.0~~	~~0.0~~	~~6 04/22/92~~	~~DALI 1991~~	
~~170~~	~~F~~	~~058:08:31.134~~	~~136:20:53.813~~	~~5~~	~~250~~	~~0.0~~	~~0.0~~	~~6 04/04/92~~	~~ZEN 1991~~	
~~178~~	~~F~~	~~058:11:43.986~~	~~136:22:37.906~~	~~9~~	~~250~~	~~0.0~~	~~0.0~~	~~A 03/22/92~~	~~GRAN 1938~~	
~~127~~	~~F~~	~~058:12:08.803~~	~~136:21:21.304~~	~~5~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~HOLE~~	
~~171~~	~~F~~	~~058:11:39.817~~	~~136:21:29.942~~	~~10~~	~~250~~	~~0.0~~	~~0.0~~	~~A 04/04/92~~	~~WITE 1938~~	
~~137~~	~~F~~	~~058:12:36.107~~	~~136:21:49.754~~	~~19~~	~~250~~	~~0.0~~	~~0.0~~	~~6 04/22/92~~	~~DUNK-NO 2 1938~~	
152	F	058:09:57.989	136:23:25.066	6	250	0.0	0.0	4 04/20/92	RUDE 2 1991	581362✓
~~154~~	~~F~~	~~058:09:12.755~~	~~136:23:04.548~~	~~20~~	~~250~~	~~0.0~~	~~0.0~~	~~4 04/21/92~~	~~DREAD 1991~~	
~~155~~	~~F~~	~~058:11:38.476~~	~~136:23:48.166~~	~~0~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~WEST~~	
~~156~~	~~F~~	~~058:11:51.099~~	~~136:23:28.690~~	~~0~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~DALE~~	
~~157~~	~~F~~	~~058:07:39.977~~	~~136:17:50.319~~	~~3~~	~~250~~	~~0.0~~	~~0.0~~	~~1 05/04/92~~	~~LLAMA 1991~~	
~~103~~	~~F~~	~~058:06:17.744~~	~~136:16:23.124~~	~~1~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~BUZZ~~	
~~104~~	~~F~~	~~058:08:52.207~~	~~136:17:35.470~~	~~7~~	~~250~~	~~0.0~~	~~0.0~~	~~A 04/07/92~~	~~POCKET 1991~~	
~~105~~	~~F~~	~~058:08:52.900~~	~~136:16:22.957~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~CLAM~~	
~~106~~	~~F~~	~~058:09:41.099~~	~~136:19:39.784~~	~~7~~	~~250~~	~~0.0~~	~~0.0~~	~~6 04/04/92~~	~~INIAN 1970~~	
~~234~~	~~Z~~	~~058:07:28.094~~	~~136:18:51.778~~	~~5~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~TOWN(R/AZ)~~	
~~257~~	~~Z~~	~~058:07:39.977~~	~~136:17:50.319~~	~~3~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~LLAMA(R/AZ)~~	
~~203~~	~~Z~~	~~058:06:17.744~~	~~136:16:23.124~~	~~3~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~BUZZ(R/AZ)~~	
~~270~~	~~Z~~	~~058:08:31.134~~	~~136:20:53.813~~	~~3~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~ZEN(R/AZ)~~	
~~239~~	~~Z~~	~~058:09:58.282~~	~~136:21:33.918~~	~~7~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~DALI(R/AZ)~~	
422	F	058:13:37.890	136:35:00.197	13	250	0.0	0.0	7 05/02/92	APRIL 1992	581363✓
423	F	058:17:24.870	136:28:55.119	5	250	0.0	0.0	A 05/02/92	FERN 1992	581362✓
424	F	058:19:04.579	136:33:30.893	7	250	0.0	0.0	A 05/07/92	SPIT TP 1992	581363✓
~~125~~	~~F~~	~~058:16:11.116~~	~~136:24:18.155~~	~~12~~	~~250~~	~~0.0~~	~~0.0~~	~~8 05/07/92~~	~~EX 1901~~	
323	Z	058:17:24.870	136:28:55.119	5	250	0.0	0.0	00/00/00	FERN(R/AZ)	581362✓
517	Z	058:17:59.613	136:29:08.752	4	250	0.0	0.0	00/00/00	DEPT(R/AZ)	581362✓
390	Z	058:17:51.075	136:27:03.058	9	250	0.0	0.0	00/00/00	LUMBER(R/AZ)	581362✓
316	Z	058:12:43.819	136:22:51.081	9	250	0.0	0.0	00/00/00	ADZE(R/AZ)	581362✓
214	Z	058:18:41.982	136:31:10.409	13	250	0.0	0.0	00/00/00	TAYLOR 1985(R/AZ)	581363✓
317	Z	058:17:59.613	136:29:08.752	4	250	0.0	0.0	00/00/00	DEPT(R/AZ)	581362✓
~~113~~	~~F~~	~~058:12:43.819~~	~~136:22:51.081~~	~~7~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~ADZE 1901~~	
~~116~~	~~F~~	~~058:12:07.020~~	~~136:22:15.121~~	~~8~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~BEER~~	
~~142~~	~~F~~	~~058:08:31.134~~	~~136:20:53.813~~	~~4~~	~~250~~	~~0.0~~	~~0.0~~	~~00/00/00~~	~~ZEN 1991~~	

✓KRL

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102-3767

NOAA Ship RAINIER

June 9, 1992

Director
DMAHTC
Attn: MCNM
6500 Brookes Lane
Washington, DC 20315-0030

ADVANCE INFORMATION

Dear Sir:

While conducting hydrographic survey operations in Cross Sound, Alaska, NOAA Ship RAINIER discovered eleven dangers to navigation. They have been reported to DMAHTCNAVWARN and the Seventeenth Coast Guard District. A copy of the correspondence describing the dangers is enclosed.

Sincerely,

Thomas W. Richards
Captain, NOAA
Commanding Officer

Enclosures

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of NOAA Corps Operations
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102-3767

NOAA Ship RAINIER

June 9, 1992

Commander
Seventeenth Coast Guard District
Post Office Box 3-5000
Juneau, AK 99802

ADVANCE INFORMATION

Dear Sir:

Attached is a confirmation copy of the radio message sent to your office regarding the dangers to navigation which I recommend for inclusion in the Local Notice to Mariners for the Seventeenth Coast Guard District. A copy of the chart showing the areas in which the dangers exist is also attached.

Sincerely,

Thomas W. Richards
Captain, NOAA
Commanding Officer

Enclosures

cc: DMAHTC
N/CG221
PMC

P 261707Z MAY 92
FM NOAAS RAINIER
TO CCGDSEVENTEEN JUNEAU AK
DMAHTCNAVWARN WASHINGTON DC//MCNM//
INFO NOAAMOP SEATTLE WA
ACCT CM-VCAA
BT

ADVANCE INFORMATION

UNCLAS
NOAA SHIP RAINIER HAS FOUND 3 DANGERS TO NAVIGATION IN CROSS SOUND, ALASKA (PROJECT OPR-0106-RA) WITHIN THE LIMITS OF HYDROGRAPHIC SURVEY H-10425, TAYLOR BAY.

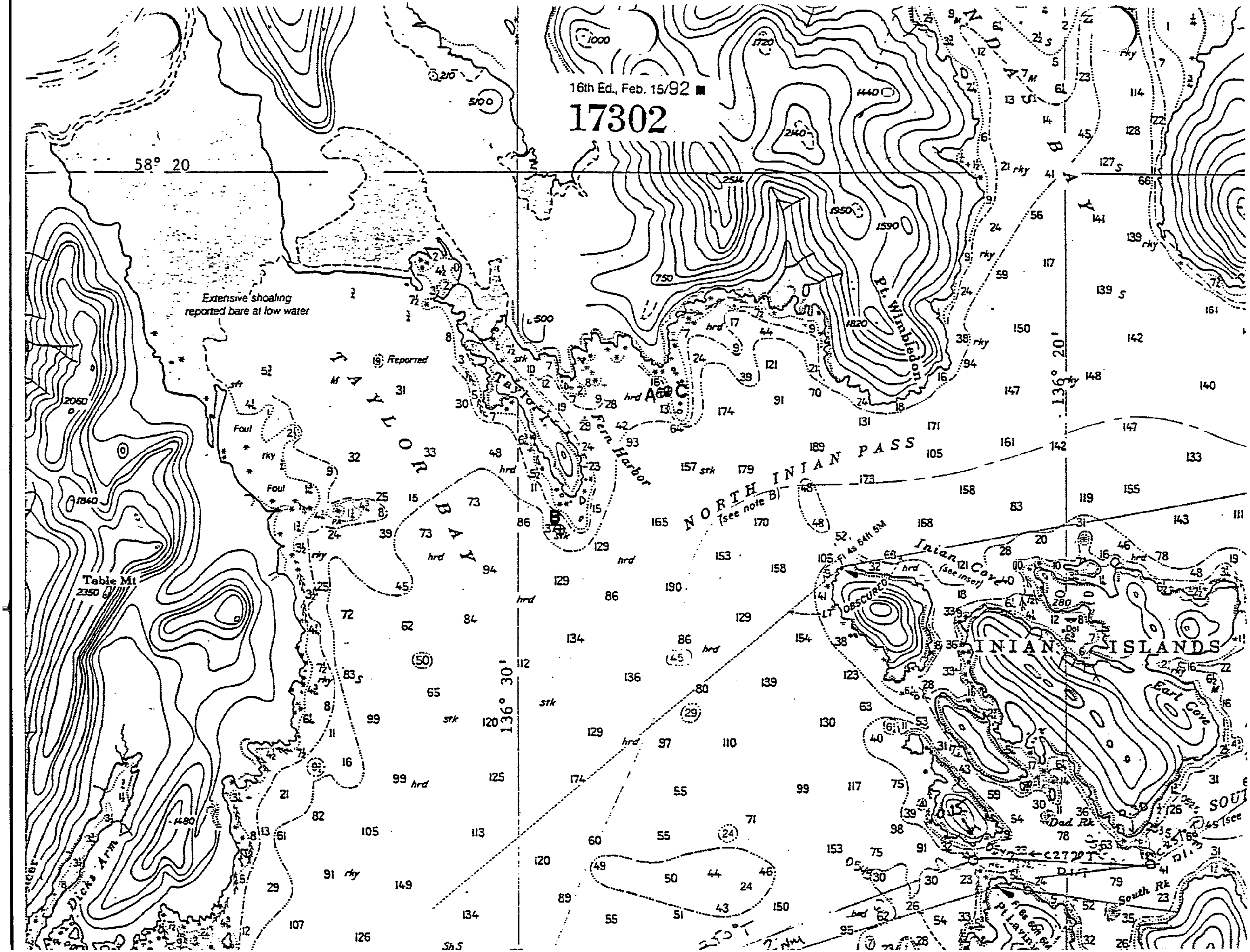
THE FOLLOWING INFORMATION IS PROVIDED FOR PUBLICATION IN LOCAL NOTICE TO MARINERS:

CHART AFFECTED: 17302 16TH ED FEB 15/92 1:80,000 NAD83

DEPTHS ARE REDUCED TO MLLW BASED ON PREDICTED TIDES.

ITEM	DANGER	CHART	DEPTH	DATUM	LATITUDE	LONGITUDE
A.	ROCK COVERS	17302	1/4 fm	NAD 83	58/17/55.80N	136/27/24.42W
B.	ROCK COVERS	17302	1/4 fm	NAD 83	58/16/~~40.78~~ 51.11N	136/29/~~12.40~~ 15.59W
C.	ROCK COVERS	17302	0 fm	NAD 83	58/17/57.03N	136/27/16.85W

THIS IS ADVANCE INFORMATION SUBJECT TO OFFICE REVIEW. QUESTIONS CONCERNING THIS MESSAGE SHOULD BE DIRECTED TO THE CHEIF, PACIFIC HYDROGRAPHIC SECTION AT (206) 526-6835. A LETTER WITH ATTACHED CHARTLET IS BEING MAILED TO CONFIRM THIS MESSAGE.
BT


16th Ed., Feb. 15/92
17302
58° 20
136° 20'
136° 30'
TAYLOR BAY
NORTH INIAN PASS
(see note B)
INIAN ISLANDS
Inian Cove
(see inset)
Earl Cove
Pt. Wimbledon
Fern Harbor
Taylor I.
Table Mt
2350
Dicks Arm
Extensive shoaling
reported bare at low water
Reported
Foul
OBSCURED
Dad Rk
South Rk
Pt Lavinia

July 23, 1992

Commander
Seventeenth Coast Guard District
Post Office Box 3-5000
Juneau, AK 99802

ADVANCE INFORMATION

Dear Sir:

During the office processing of hydrographic surveys H-10376, H-10420 and H-10425 in Cross Sound, Alaska six additional dangers to navigation have been discovered, and one previously reported by the RAINIER with radio traffic on May 26, 1992 is rescinded. These dangers affect the following chart:

Chart	Edition/date	Datum
17302	15th Ed., 15/20/89	NAD 83

It is recommended that the revised Report of Dangers to Navigation be included in the Local Notice to Mariners.

Questions concerning this report should be directed to the Pacific Hydrographic Section at (206) 526-6853.

Sincerely,

Douglas G. Hennick
Commander, NOAA
Chief, Pacific Hydrographic Section

Enclosure

cc: DMA/TC
N/CG221

REPORT OF DANGERS TO NAVIGATION

ADVANCE INFORMATION

Hydrographic Survey Registry Number: H-10425
Survey Title: State:ALASKA
Locality:CROSS SOUND
Sublocality:TAYLOR BAY

Project Number: OPR-O106-RA

All features reduced to Mean Lower Low Water using predicted tides.

Affected nautical chart:

Chart	Edition/date	Datum
17302	15th Ed., 5/20/89	NAD 83

DANGER TO NAVIGATION	LATITUDE(N)	LONGITUDE(W)
1/2FM RK	58/17/09.0	136/29/42.0
1FM RK	58/17/56.0	136/28/51.0
1/4FM ROCK * (SEE NOTE)	58/16/40.78	136/~~27~~ 29/~~16.85~~ 12.40

* This was reported as a danger to navigation on May 26, 1992. However after further investigation during office review, we determined that there is no danger at this location.

Questions concerning this report should be directed to the Pacific Hydrographic Section at (206)526-6853.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Coast and Geodetic Survey
Seattle, Washington 98115-0070

August 9, 1993

Commander (OAN)
Seventeenth Coast Guard District
Post Office Box 3-5000
Juneau, AK 99802

Dear Sir:

During the final office processing of hydrographic survey H-10425 in Cross Sound, Alaska, it was determined that a previously reported danger to navigation should be revised. This danger affects the following chart.

Chart	Edition/date	Datum
17302	16th ED., 2/15/92	NAD 83

It is recommended that the revised Report of Dangers to Navigation be included in the Local Notice to Mariners.

Questions concerning this report should be directed to the Pacific Hydrographic Section at (206) 526-6853.

Sincerely,

Douglas G. Hennick
Commander, NOAA
Chief, Pacific Hydrographic Section

Enclosure

cc: DMA/TC
N/CG221

REPORT OF DANGERS TO NAVIGATION

Hydrographic Survey Registry Number: H-10425
Survey Title: State: ALASKA
Locality: CROSS SOUND
Sublocality: TAYLOR BAY
Project Number: OPR-O106-RA

All features reduced to Mean Lower Low Water using predicted tides.

Affected nautical chart:

Chart	Edition/date	Datum
17302	16th Ed., 2/15/92	NAD 83

DANGER TO NAVIGATION	LATITUDE	LONGITUDE(W)
1/4 FM Rock	58/16/40.78	136/29/12.40

This was rescinded as a danger to navigation on July 23, 1992. However, after further investigation during office review, it was determined the longitude should be revised from longitude 136/27/16.85W, to the value above.

Questions concerning this report should be directed to the Pacific Hydrographic Section at (206) 526-6853.

APPROVAL SHEET

for

H-10425

RA-10-3-92

Standard procedures were followed in accordance with the Hydrographic Manual, Fourth Edition; the Hydrographic Survey Guidelines; and the Field Procedures Manual in producing this survey. The data were examined daily during data acquisition and processing.

The field sheet and accompanying records have been examined by me, are considered complete and adequate for charting purposes, and are approved.

Thomas W. Richards
Captain, NOAA
Commanding Officer

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Rockville, Maryland 20852

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: September 15, 1992

MARINE CENTER: Pacific

OPR: 0106-RA

HYDROGRAPHIC SHEET: H-10425

LOCALITY: Taylor Bay, Cross Sound, Alaska

TIME PERIOD: April 19 - May 9, 1992

TIDE STATIONS USED: 945-2629 (945-2630) Inian Cove, Alaska
Lat. 58° 15.8'N Lon. 136° 19.5'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 10.05 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 10.8 ft.

REMARKS: RECOMMENDED ZONING

In Taylor Bay, Fern Harbor and North Inian Pass, apply a -6 minute time correction and a x0.91 range ratio to Inian Cove (945-2629).

Notes: Inian Cove station # is 945-2629, however, the data is in file # 945-2630.

Times are tabulated in Greenwich Mean Time.

CHIEF, DATUMS SECTION

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-10425

Name on Survey	A ON CHART NO. 17302	B ON PREVIOUS SURVEY NO.	C TP-01327-30	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		X							1
CROSS SOUND	X		X							2
FERN HARBOR	X		X							3
NORTH INIAN PASS	X		X							4
TAYLOR BAY	X		X							5
TAYLOR ISLAND	X		X							6
										7
										8
										9
										10
										11
										12
										13
										14
				Approved:						15
										16
				Charles E. Harrington						17
				Chief Geographer - N/CG2x5						18
				OCT 30 1992						19
										20
										21
										22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

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

U.S. DEPARTMENT OF COMMERCE

HYDROGRAPHIC SURVEY STATISTICS

REGISTRY NUMBER
H-10425

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	7
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	2

DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS	
ACCORDION FILES	2					
ENVELOPES						
VOLUMES	4					
CAHIERS						
BOXES				1		

SHORELINE DATA

SHORELINE MAPS (List):

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List):

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

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	*EVALUATION*	*TOTALS*
POSITIONS ON SHEET			2408
POSITIONS REVISED			
SOUNDINGS REVISED			
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	72		72
VERIFICATION OF SOUNDINGS	93		93
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	136		136
COMPARISON WITH PRIOR SURVEYS AND CHARTS		7	7
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		28	28
GEOGRAPHIC NAMES			
OTHER*			
*USE OTHER SIDE OF FORM FOR REMARKS — TOTALS	301	35	336

Pre-processing Examination by J. Griffin	*Beginning Date* 7/6/92	*Ending Date* 8/4/92
Verification of Field Data by M. Sanders, E. Domingo	*Time (Hours)* 301	*Ending Date* 6/15/93
Verification Check by J. Stringham	*Time (Hours)* 69	*Ending Date* 6/15/93
Evaluation and Analysis by R. Davies	*Time (Hours)* 35	*Ending Date* 7/14/93
Inspection by B. Olmstead	*Time (Hours)* 36	*Ending Date* 7/26/93

EVALUATION REPORT

H-10425

1. INTRODUCTION

Survey H-10425 is a basic hydrographic survey accomplished by the NOAA Ship RAINIER under the following Project Instructions.

OPR-O106-RA, dated February 18, 1992

This survey was conducted in Alaska and covers Taylor Bay, Fern Harbor and a portion of North Inian Pass. The surveyed area extends from latitude 58/16/29N to latitude 58/19/03N, and from longitude 136/26/30W to longitude 136/35/18W. The shoreline in the area is characterized by rocks, rock ledges, and many submerged rocks and islets near shore. The bottom consists of sand, silt and pebbles. Depths range from zero to 273 meters.

Predicted tides for Sitka, Alaska were used for the reduction of soundings during field processing. Approved hourly heights zoned from Inian Cove, Alaska, gage 945-2629, 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. NAD 83 is used as the horizontal datum for plotting and position computation. The TRA and sound velocity correctors were recomputed during office processing to correct the offset tables. On DN 110, vessel 2124, the C-O correctors (horizontal correctors) were reapplied to correct the application of the baseline values. An accompanying computer printout contains the parameters and the correctors.

A digital file has been generated for this survey that includes categories of information required to comply with Hydrographic Survey Guidelines No. 52, Standard Digital Data Exchange Format, April 15, 1986. 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 H and I of the hydrographer's report and the Spring 1992 Horizontal and Electronic Control Reports for OPR-O106-RA, contain adequate discussions of horizontal control and hydrographic positioning.

Positions of horizontal control stations used during hydrography are 1991 and 1992 field and published values based on NAD 83. These values were used during office processing for the computation of positions. The smooth sheet and accompanying overlays are annotated with NAD 27 adjustment ticks based on values determined with NGS program NADCON. Geographic positions based on NAD 27 may be plotted on the smooth sheet utilizing the NAD 83 projection by applying the following corrections.

Latitude: -1.324 seconds (-40.973 meters)
Longitude: 6.684 seconds (108.883 meters)

The year of establishment of control stations shown on the smooth sheet originates with the NGS listing and the previously mentioned horizontal control report.

The quality of several positions exceeds limits in terms of error circle radius and residual. A review of the data, however, indicates that none of these fixes are used to position dangers to navigation. The features or soundings located by these fixes are consistent with surroundings. These fixes are considered acceptable.

The following shoreline maps apply to this survey.

	Photo Date	Class
TP-01327	June 1985	III
TP-01328	June 1985	III
TP-01329	June 1985	III
TP-01330	June 1985	III

The following shoreline changes are depicted on the smooth sheet with a dashed red line, and were transferred from the final field sheet without supporting positional information. These revisions are approximate but adequate to supersede the common photogrammetrically delineated shoreline.

Feature	Latitude(N)	Longitude(W)
HWL	58/17/47	136/29/28
HWL	58/17/09	136/28/45

The following shoreline changes are depicted on the smooth sheet with a solid red line, and were transferred from the final field sheet with supporting positional information. These revisions are adequate to supersede the common photogrammetrically delineated shoreline.

Feature	Latitude(N)	Longitude(W)
HWL	58/18/02	136/27/03
HWL	58/17/46	136/27/08

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 Field Procedures Manual, March 1992 Edition.

5. JUNCTIONS

Survey H-10425 junctions with the following surveys.

Survey	Year	Scale	Area
H-10374	1991	20000	South
H-10419	1992	10000	East
H-10426	1992	10000	South

The junctions with surveys H-10419 and H-10426 are complete.

The junction with survey H-10374 and the present survey was not completed because survey H-10374 was previously submitted for charting. The junction comparison was made using a copy. Portions of the depth curves on surveys H-10374 should be adjusted to conform with those on this survey. Some soundings have been transferred to survey H-10425 to better portray the bottom in the common area.

6. COMPARISON WITH PRIOR SURVEYS

H-2558 (1901) 1:40000

Survey H-2558 covers the entire area of the present survey. Taylor Bay has seen a considered amount of change since the prior survey. The Brady Glacier which is located at the head of Taylor Bay has receded several miles depositing a considerable amount of glacier debris and sediments. There has been extensive shoaling as a result. Overall there is an average difference in depths throughout the survey area of between 10 to 15 meters, with extreme differences of 85 meters, which are usually near steep sloping bottoms. The greatest amount of change is seen in northern Taylor Bay, above latitude 58/18/45N, where depths since 1901 have shoaled over forty meters. Another notable area of change is evident just northwest of Taylor Island. Here, a once navigable body of water containing depths up to 5.5 fathoms (10 meters) is no longer present. This area is now charted as a marsh area and lies behind the mean high waterline. Shoreline along the north and western limits of Taylor Bay has changed significantly. This change reflects a seaward movement ranging from several hundred meters to almost one nautical mile. Shoreline east of Taylor Island has remained fairly stable in the last 91 years.

This area has experienced earthquakes, isostatic rebound and natural accretion and erosional processes. These processes, the different horizontal datums, the greater sounding coverage and the improved accuracy of the data acquisition techniques account for the differences between the soundings on the prior survey.

There are no AWOIS items within the survey area which originate with the prior survey mentioned above.

In accordance with Hydrographic Survey Guideline No. 39, the effects of the 1964 Prince William Sound earthquake were considered in the comparison of this survey. No reasonable adjustment value for prior soundings could be determined.

Survey H-10425 is adequate to supersede the prior survey within the common area.

7. COMPARISON WITH CHART

Chart 17302, 16th edition, dated February 15, 1992; scale 1:80000

a. Hydrography

Charted hydrography originates with prior survey H-2558 and miscellaneous sources and needs no further discussion except as follows.

A rock PA, charted at 58/16/50N, longitude 136/33/19W, was searched for and disproved. The hydrographer did find a rock at latitude 58/16/46.92N, longitude 136/33/08.14W. It is recommended that the charted rock PA be removed and the rock located on this survey be charted.

A group of three charted rocks at latitude 58/19/09N, longitude 136/31/45W, are now behind the approximate HWL. These rocks should be removed from the chart.

The following charted rocks were not investigated or discussed and should be retained.

Feature	Latitude(N)	Longitude(W)
rock	58/17/24	136/35/20
rock	58/17/21	136/35/19
rock	58/17/26	136/34/54
rock	58/17/10	136/34/51
rock	58/16/38	136/34/18

Except for the above charted features, survey H-10425 is adequate to supersede charted hydrography within the common area.

b. AWOIS

There is one AWOIS item which originates from a miscellaneous source. AWOIS item 51794, a 9-fathom reported depth, charted at latitude 58/18/12N, longitude 136/32/35W, was searched for and disproved. Soundings in the area investigated range from 24.6 meters to 36 meters. It is recommended that the 9-fathom reported depth be removed from the chart and soundings from this survey be charted.

c. Controlling Depths

There are no controlling depths found within the survey area.

d. Aids to Navigation

There are no aids to navigation within the survey area.

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 three dangers to navigation to the Seventeenth District of the United States Coast Guard, Juneau, Alaska. A copy of the message is attached. Two additional dangers and one revision to a field reported danger were discovered during office processing and were reported to the Coast Guard, DMAHTC and N/CG221, see attached letter.

8. COMPLIANCE WITH INSTRUCTIONS

Survey H-10425 adequately complies with the Project Instructions, except as noted in this report.

9. ADDITIONAL FIELD WORK

This is an adequate hydrographic survey. Additional field work is recommended on a low priority basis to investigate the features listed in section 7 of this report.

C. R. Davies
Cartographer

APPROVAL SHEET
H-10425

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, cartographic symbolization, comparison with prior surveys and verification or disproval of charted data. The digital data have been completed and all revisions and processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts have been made and are included with the survey records. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

for Bruce A. Olmstead Date: August 6, 1993
Dennis J. Hill
Chief, Hydrographic Processing Unit
Pacific Hydrographic Section

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

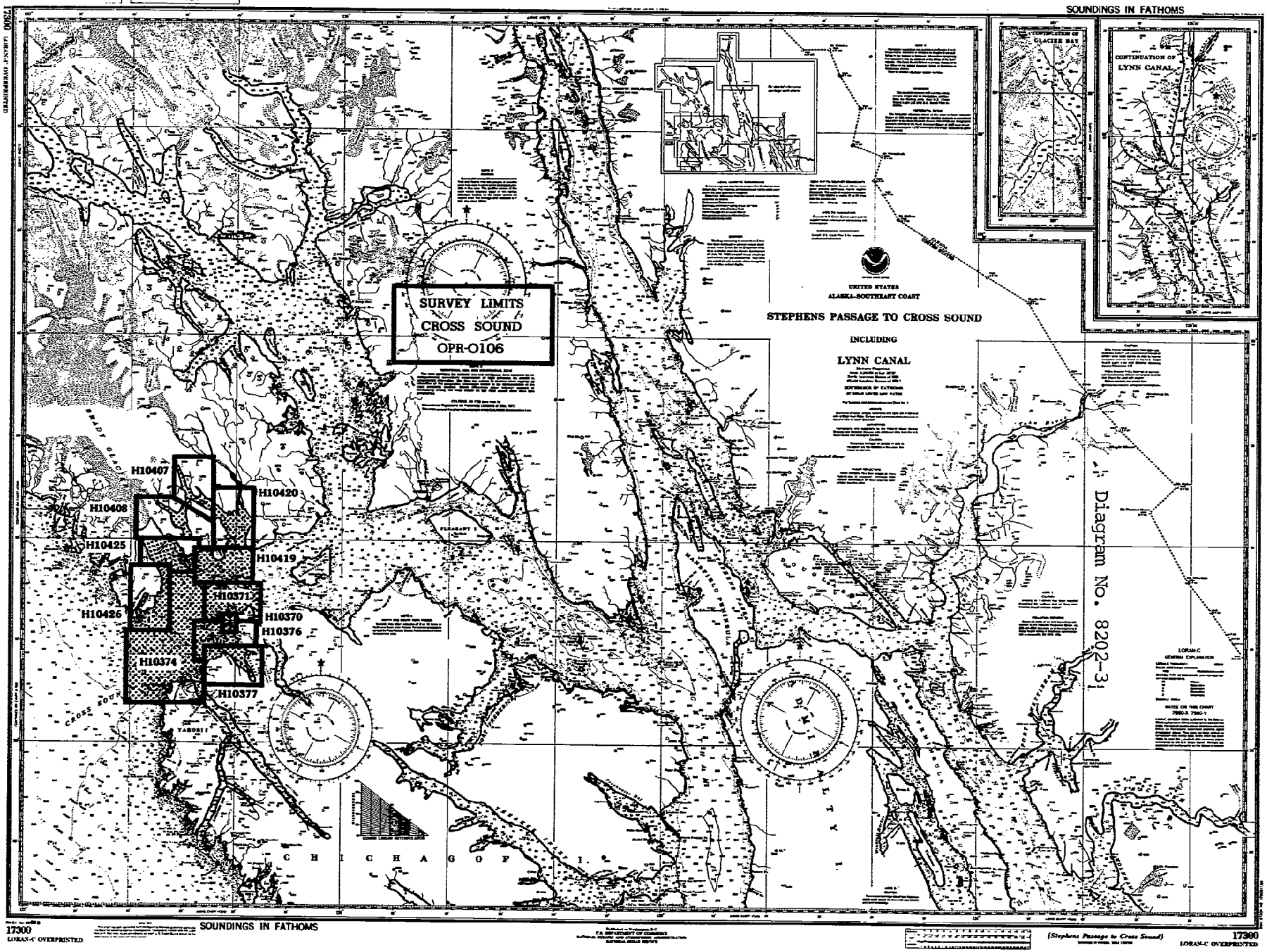
Douglas G. Hennick Date: 8/9/93
Commander Douglas G. Hennick, NOAA
Chief, Pacific Hydrographic Section

****

Final Approval

Approved:

J. Austin Yeager Date: 8/10/94
J. Austin Yeager
Rear Admiral, NOAA
Director, Coast and Geodetic Survey


SOUNDINGS IN FATHOMS
SURVEY LIMITS
CROSS SOUND
OPR-O106
UNITED STATES
ALASKA-SOUTHEAST COAST
STEPHENS PASSAGE TO CROSS SOUND
INCLUDING
LYNN CANAL
H10407
H10420
H10408
H10425
H10419
H10371
H10426
H10370
H10376
H10374
H10377
Diagram No. 8202-31
SOUNDINGS IN FATHOMS
17300
LORAN-C OVERPRINTED
(Stephens Passage to Cross Sound)
17300
LORAN-C OVERPRINTED

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10425

INSTRUCTIONS

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

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

CHART	DATE	CARTOGRAPHER	REMARKS
17302	2/29/96	DON CORDTS	Full ~~Part Before~~ After Marine Center Approval Signed Via
	8-96	DC Harpine	Drawing No. 19, 17th Ed., AUG 14/93
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
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			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED