H10580

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-10-20-94

Registry No. H-10580

LOCALITY

State Alaska

General Locality Prince William Sound

Sublocality Western Side of Naked Island and Vicinity

19 94

CHIEF OF PARTY
CAPT Russell C. Arnold, NOAA

NOAA FORM 77-28 (11-72)

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

REGISTER NO.
H-10580

HYDROGRAPHIC TITLE SHEET

FIELD NO.
RA-10-20-94

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

State: Alaska

General locality: Prince William Sound

Locality: Western Side of Naked Island and Vicinity

Scale: 1:10,000 Date of survey: Oct. 4 - Nov. 1, 1994

Instructions dated: July 25, 1994 Project No.: OPR-P125-RA

Vessel: NOAA Ship RAINIER (2120), 2122(RA-2),2123(RA-3),2124(RA-4),2125(RA-5)

Chief of party: CAPT Russell C. Arnold, NOAA

Surveyed by: CAPT R.Arnold, LT D.Neander, LT D.Haines, LT J.Neander,LTJG G.Glover, ENS S.Smith, ENS S.Maenner, ENS J.Becker, ENS M.Daniels, SST J.Fleischmann, ST. B.Roraback, ST J.Jackson

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

Graphic record scaled by: RAINIER Personnel

Graphic record checked by: RAINIER Personnel

Evaluation by: ~~Protracted by~~: I. Almacen Automated plot by: HP Design Jet 650C Plotter

Verification by: D. Doles, L. Deodato, G. Kay, R. Mayor

Soundings in ~~fathoms~~ ~~feet~~ at ~~MLW~~ MLLW: Meters & 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.

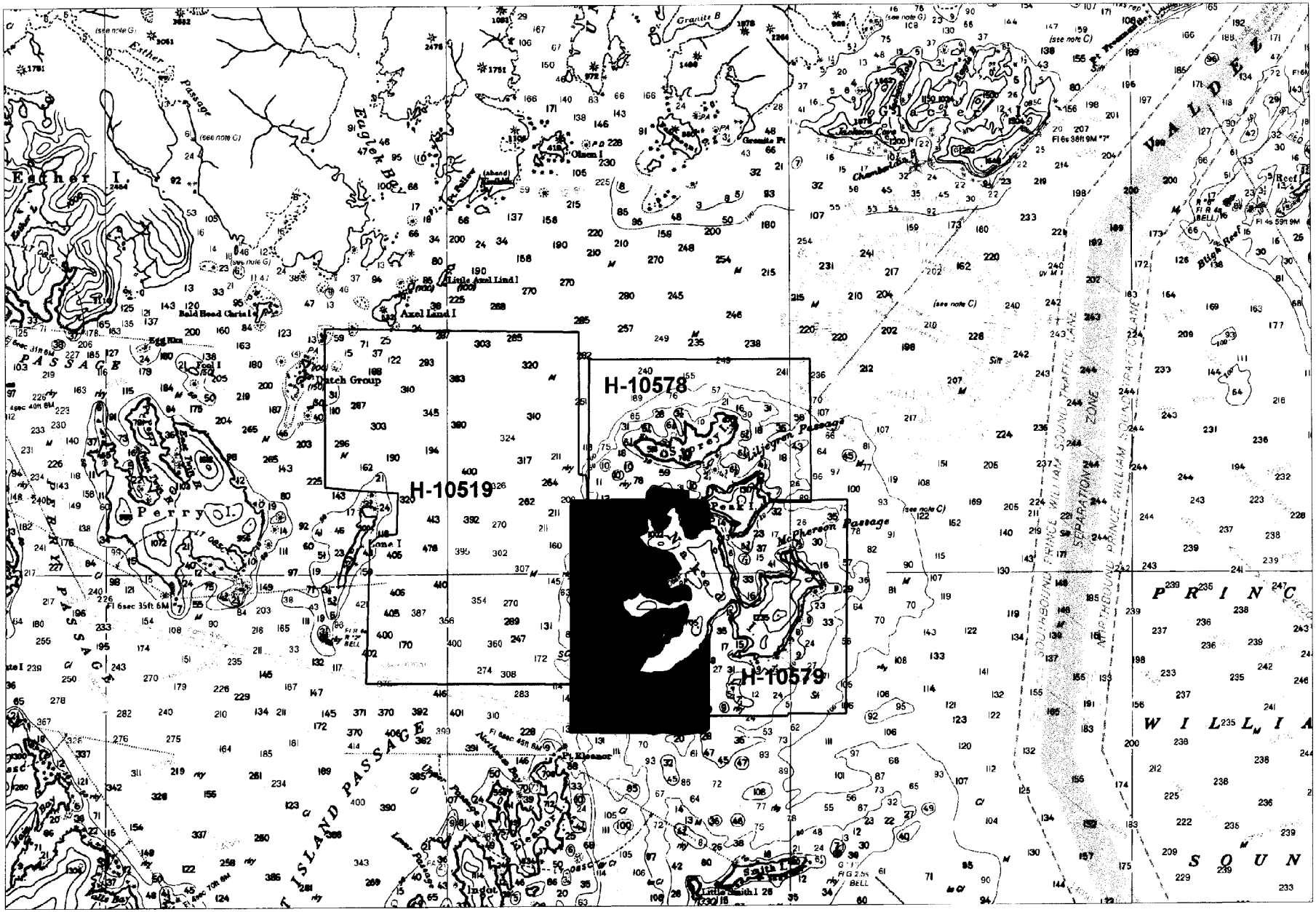
All depths listed in this report are referenced to mean lower low water unless otherwise noted.

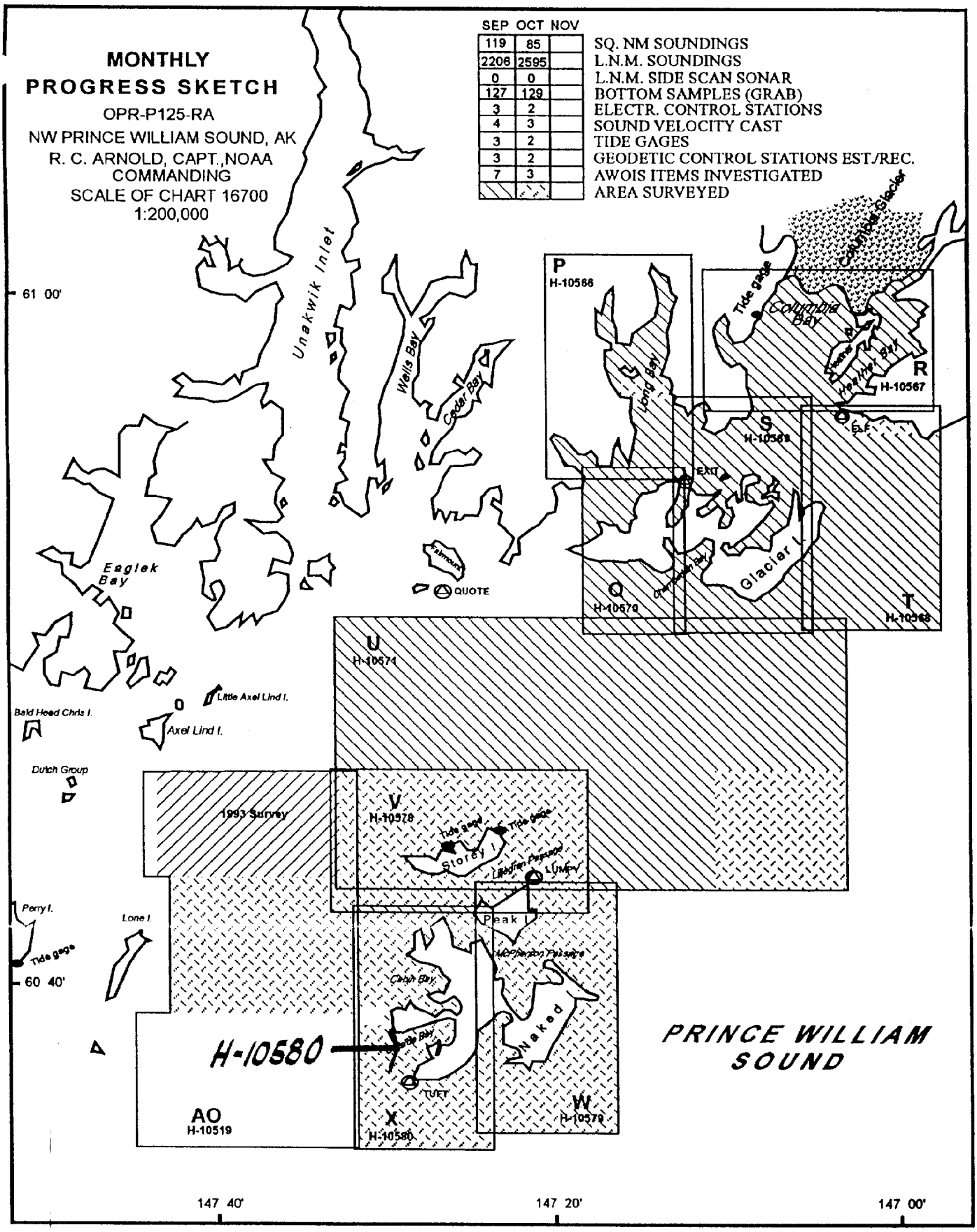
AWOIS/SURF chk 2/22/96 mcR

FEB 20 1996

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

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


H-10578
H-10519
H-10579
Esther I.
Perry I.
Eagle Bay
Esther Passage
Granite B
Olsen I
Axel Lind I
Little Axel Lind I
Bald Head Christ I
Egg Rks
Dutch Group
Zone I
Hillegan Passage
McPherson Passage
Reef Pt
Blue Fox Bay
Blue Fox Reef
Chamberlain Cove
Granite Pt
Reef
Reef Pt
Ingot
Little Smith I
Pt Eleanor
Northwest Passage
Lower Passage
ISLAND PASSAGE
PASSAGE
PASSAGE
VALDEZ
PRINCE WILLIAM SOUND
SOUTHBOUND TRAFFIC LANE
SEPARATION ZONE
NORTHBOUND TRAFFIC LANE
Fl 6sec 35ft 6M
Fl sec 45ft 8M
Fl 4s 59ft 9M


MONTHLY
PROGRESS SKETCH
OPR-P125-RA
NW PRINCE WILLIAM SOUND, AK
R. C. ARNOLD, CAPT., NOAA
COMMANDING
SCALE OF CHART 16700
1:200,000
SEP OCT NOV
119 85 SQ. NM SOUNDINGS
2206 2595 L.N.M. SOUNDINGS
0 0 L.N.M. SIDE SCAN SONAR
127 129 BOTTOM SAMPLES (GRAB)
3 2 ELECTR. CONTROL STATIONS
4 3 SOUND VELOCITY CAST
3 2 TIDE GAGES
3 2 GEODETIC CONTROL STATIONS EST./REC.
7 3 AWOIS ITEMS INVESTIGATED
AREA SURVEYED
61 00'
60 40'
147 40'
147 20'
147 00'
Unakwik Inlet
Wells Bay
Cedar Bay
Eaglek Bay
Bald Head Chris I.
Little Axel Lind I.
Axel Lind I.
Dutch Group
Perry I.
Lone I.
Tide gage
QUOTE
Palmaria
P
H-10566
Tide gage
Columbia Bay
Columbia Glacier
Long Bay
R
H-10567
S
H-10569
EXIT
Glacier I.
Q
H-10570
T
H-10568
U
H-10571
V
H-10572
1993 Survey
Storey I.
Tide gage
Tide gage
Pleak I.
LUMPY
Catch Bay
Naked I.
H-10580
TUFT
AO
H-10519
X
H-10580
W
H-10579
PRINCE WILLIAM SOUND

Descriptive Report to Accompany Hydrographic Survey H-10580

Field Number RA-10-20-94
Scale 1:10,000
October - November 1994

NOAA Ship RAINIER
Chief of Party: Captain Russell C. Arnold

A. PROJECT

This basic hydrographic survey was completed in ~~Northwestern~~ part of Prince William Sound, Alaska, as specified by Project Instructions OPR-P125-RA dated July 25, 1994.

Survey H-10580 corresponds to "sheet X" as defined in the Project Instructions.

This survey will provide contemporary hydrographic survey data for updating existing nautical charts, and for constructing two 1:50,000 scale charts covering the fiords and bays within the project area. Requests for hydrographic surveys and updated charts have been received from the Defense Mapping Agency, the Southwest Alaska Pilot's association, cruise ship lines and local fishermen.

B. AREA SURVEYED (See EVAL RPT., Sec. B)

The survey area is located in ~~Northwest~~ part of Prince William Sound, in the vicinity of ~~West~~ the western side of Naked Island. The survey's eastern limit is bounded by 147°25.0'W, Naked and Peak Islands, and the western limit is bounded by 147°33.0' W. The northern limit is bounded by latitude 60°42.0' N, and the southern limit is bounded by 60°35.~~5~~ 30" N.

Data acquisition was conducted from October 4, 1994, Day Number (DN) 277, through November 1, 1994, DN 305.

C. SURVEY VESSELS

Data were acquired by the NOAA SHIP RAINIER and four survey launches as noted below:

Vessel	EDP #	Operation
RAINIER	2120	Hydrography Sound Velocity Casts Bottom Samples
RA-2	2122	Hydrography Shoreline Verification

RA-3	2123	Hydrography Shoreline Verification
RA-4	2124	Hydrography Shoreline Verification
RA-5	2125	Hydrography Shoreline Verification Bottom Samples

D. AUTOMATED DATA ACQUISITION AND PROCESSING

Data acquisition and processing were accomplished with the following HDAPS programs:

Program Name	Version	Date Installed
BACKUP	2.00	3/7/94
BASELINE	1.14	3/7/94
BIGABST	2.07	3/7/94
BIGAUTOST	3.01	3/7/94
BLKEDIT	2.02	3/7/94
CARTO	2.15	8/29/94
CLASSIFY	1.05	3/7/94
CONVERT	3.63	8/29/94
DAS_SURV	6.74	8/29/94
DIAGNOSE	3.05	8/29/94
DISC-UTIL	1.00	3/7/94
DP	2.15	8/29/94
EXCESS	4.31	8/29/94
FILESYS	3.27	8/29/94
GRAFEDIT	1.06	3/7/94
LISTDATA	1.02	3/7/94
LOADNEW	2.10	3/7/94
LSTAWOIS	3.07	5/12/94
MAINMENU	1.20	3/7/94
MAN_DATA	2.01	3/7/94
NEWPOST	6.12	8/29/94
PLOTALL	2.30	8/29/94
POINT	2.10	3/7/94
PREDICT	2.01	3/7/94
PRESURV	7.09	8/29/94
PRINTOUT	4.04	8/29/94
QUICK	2.05	8/29/94
RAMSAVER	1.02	3/7/94

REAPPLY	2.11	8/29/94
SCANNER	1.00	3/7/94
SELPRINT	2.05	8/29/94
SYMBOLS		3/7/94
VERSIONS	1.00	3/7/94
ZOOMEDIT	2.30	8/29/94

HYPACK Program Name	**Version**	**Date Installed**
HYPACK.EXE	4.16	2/24/94
PLOTFILE.EXE	4.16	2/25/94
SETUP.EXE	4.16	2/15/94
VIEW.EXE	4.16	12/12/93
DESIGN.EXE	4.16	2/1/94
VOLUME.EXE	4.16	1/27/94
FORGP.EXE	4.16	11/12/93
NAVITRACK.EXE	4.16	2/1/93
CONTPICK.EXE	4.16	12/8/92
DIGITIZE.EXE	4.16	1/12/94
HYDROLIN.EXE	4.16	8/20/93
UPLOAD.EXE	4.16	8/12/92
TESTFIG.EXE	4.16	11/30/93
INVERSE.EXE	4.16	11/12/94
NAV.EXE	4.16	2/21/94
DATUM.EXE	4.16	11/23/94
GRIDCONV.EXE	4.16	12/21/93
DXF.EXE	4.16	2/11/94
MENUCOLO.EXE	4.16	8/12/92
IOTEST.EXE	4.16	2/22/94, 9/23/94
TRANS.EXE	4.16	1/6/94
OVERLAY.EXE	4.16	5/19/93
UNITCONV.EXE	4.16	11/12/93
POINTFIG.EXE	4.16	11/12/93
TRACKS.EXE	4.16	12/12/93
MANDIG.EXE	4.16	9/30/92
DATADIRS.EXE	4.16	12/17/93
COM1SET.EXE	4.16	9/15/92
NEWSETUP.EXE	4.16	2/22/94
IONEW.EXE	4.16	2/9/94
MANAGER.EXE	4.16	12/13/93
PRINTFIG.EXE	4.16	10/25/93

Some hydrography was acquired using Coastal Oceanographics' HYPACK software on launch 2122, which was equipped with an Ashtech DGPS and a DSF 6000N echosounder.

Post processing was conducted using the HDAPS HP system. HYPACK files were translated to a PC-DAS format using a modified PowerBasic program provided by N/CG24. The PowerBasic program, CONV_HYP.BAS (ver 3, 9/27/94), was run through an accompanying batch routine called HYPCON.BAT (2/14/94). OSWEGO HPCOPY was used to copy the data onto a HP formatted disk. Data were then processed in the same manner as PC-DAS on the HP system.

In addition, the following batch routine, GPSINIT.BAT(5/19/94), was used to initialize the Ashtech GPS receiver.

Velocity corrections were determined using:

Program Name	Version	Date Installed
VELOCITY	2.10	15 Mar 1994

E. SONAR EQUIPMENT

Sonar equipment was not used on ~~sheet X~~ survey H-10580.

F. SOUNDING EQUIPMENT

The Raytheon DSF-6000N is a dual frequency (100 kHz, 24 kHz), paper trace echo sounder. Serial numbers are included on the headers of the daily Raw Master Printouts.* No problems which affect survey data were encountered. All DSF-6000N soundings were acquired using the High + Low, high frequency digitized setting.

G. CORRECTIONS TO ECHO SOUNDINGS

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

Velocity Table #	Cast#	DN	Cast Position	Deepest Depth	Applicable DN
6,16	6	284	60°44'55" N 147°06'58" W	608	277-286

* Filed with the Survey records.

7,17	7	295	60°45'58" N 147°31'57" W	665	292-301
8	8	308	60°37'30" N 147°38'54" W	945	304 - 305

Casts 6, 7 & 8 plot outside the survey limits

RAINIER used velocity tables 16-17 (bottom samples) while tables 6-8 were used by the launches. The sound velocity casts were acquired with SBE SEACAT Profiler (S/N 811), calibrated 12/17/93. Velocity correctors were computed using the PC program VELOCITY in accordance with Hydrographic Survey Guideline (HSG) No. 69. A printout of the Sound Velocity Corrector Tables used in the HDAPS Post Survey program is included in the "Separates to be Included with Survey Data, IV. Sounding Equipment Calibrations and Corrections". *

Static Draft

A transducer depth was determined using FPM Fig 2.2 for vessels 2123-2125 in the spring of 1994 and for 2122 in the summer of 1994. RAINIER's transducer depth was determined during the 1990 winter inport. These values were entered into the offset tables* for each vessel.

Settlement and Squat

Correctors were computed in accordance with Hydrographic Manual Section 4.9.4.2., using FPM Fig. 2.3, and are included with project data for OPR-P125-RA.* The data for 2123-2125 was collected in Shilshole Bay, Washington in March of 1994, and for 2122 in Long Bay, Alaska in September 1994. RAINIER's settlement and squat data was collected in Shelikof Strait, Alaska on July 14, 1994.

Offset Tables

Offset tables contain offsets for the GPS antenna, as well as static draft measurements, and settlement and squat data. Offset table 1 corresponds to the RAINIER. Offset tables 2-5 correspond to the number of the vessel. The offset tables were compiled with new measurements in the spring and summer of 1994 and are contained in the "Separates to be Included with Survey Data". *

Heave

The launches are not equipped with heave, pitch and roll sensors. Data acquired during periods of significant sea action were scanned to account for inaccuracies caused by heave.

* Filed with the survey records.

Bar Check and Lead Lines

Bar check and lead lines were calibrated by RAINIER personnel during the winter inport 1993-1994. Calibration forms are included with project data for OPR-P125-RA. Bar checks were performed in accordance with FPM 2.2.2.4 and served as a functional check of the DSF-6000N. ✓

Tide Correctors

Predicted tides for the project were provided on diskette by N/OES334 for the Cordova, Alaska reference station (945-4050). ✓

Tidal correctors as provided in the project instructions for this sheet are:

Time Correction	Height Correction Range Ratio
0 hr 0 min.	X 0.94

✓

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

RAINIER personnel installed an 8200 digital gage at Storey Island (945-4553) on September 4, 1994. Opening levels to the staff and all bench marks were conducted upon installation. On September 21, 1994, a new station was installed on the north side of Storey Island (945-4571) to serve as a secondary gage for Storey Island (945-4553). Opening levels were conducted on September 22. Bracketing levels were completed by RAINIER personnel at the end of September at both gage sites. Due to the staff being destroyed at the first Storey Island gage (945-4553), closing levels were not conducted, and the gage was removed on October 26. Closing levels were completed at the secondary Storey Island gage (945-4571) on November 1 and the gage was removed on November 3. ✓

The control station was Valdez, Alaska (945-4240). Opening levels of the control station were performed by RAINIER personnel on September 16, 1994. Closing levels at Valdez, Alaska were completed by RAINIER personnel on October 28, 1994. ✓

The station description, field tide records, and Preliminary Field Tide Note (Appendix V)* was forwarded to N/OES212 in accordance with HSG 50 and FPM 4.3 at the end of September. The final tide package will be forwarded to N/OES212 at the end of the project. A request for approved tides was forwarded to N/OES2 in accordance with FPM 4.2.3. Approved tide note dated January 17, 1995 is attached. ✓

* Filed with the survey records.

H. CONTROL STATIONS (See EVAL RPT., Sec. H)

A listing of the geodetic stations used to control this survey is included in ~~Appendix III of~~ this report. The horizontal datum for this project is NAD83. ✓

DGPS stations were installed on existing stations EXIT QUOTE, LUMPY and TUFT. Station QUOTE is located on a small islet east of Outpost Island, station LUMPY is located on small peninsula at the northwest tip of Peak Island, and TUFT is located on the southwest tip of Naked Island. These stations were recovered in accordance with methods stated in Section 5.2.4 of the FPM. In addition, Coast Guard differential GPS beacon stations at Cape Hinchinbrook and Potato Point were used according to specifications listed in Section 6.2 of the Project Instructions. ✓ DGPS stations QUOTE and EXIT were used during this survey. Coast Guard GPS beacons were used for system checks only.

For further information see the "Fall 1994 Horizontal Control Report" that will be submitted at the end of the project. *

I. HYDROGRAPHIC POSITION CONTROL

All soundings and features were positioned using differential GPS. Serial numbers for Ashtech GPS equipment are annotated on the data printouts.* ✓

Ashtech GPS

Method of Position Control

VHF differential shore stations were established at stations Exit QUOTE, LUMPY and TUFT. The difference between the computed location and the station's published position was recorded by the MONITOR program on a PC. Data from a 24-hour period were recorded and examined for signs of multi-path signal reflection, which was not evident at any of the stations. Scatterplot results are included in the "Project related data for OPR-P125-RA". * The scatterplot results for station QUOTE were obtained last year. The area around station QUOTE remains undeveloped, and the geography unchanged. ✓

Calibrations & Systems Check Methods

System checks were performed in accordance with Section 3.4.4 of the FPM. Two observations of position were made from two independent DGPS base stations. The results were transferred to forms which are included in the project data for OPR-P125. An abstract of the system checks is included in the "Separates to be Included with Survey Data, III. Horizontal Position Control and Corrections to Position Data". * ✓

Problems

None

* Filed with the survey records.

J. SHORELINE (See EVAL RPT., Sec. J)

The shoreline map (T-sheet) used to transfer shoreline detail to the final sheets was DM-10191 (enlarged to 1:10,000 from 1:20,000). ✓

Method of Shoreline Verification

Shoreline verification was conducted near predicted lower low water in accordance with FPM 7.1. Shoreline verification was accomplished by assigning sequential reference numbers and taking detached positions (DPs), as explained later in this section. ✓

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

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

Detailed 1:10,000 "Bottom Sample and Detached Position Plots" are provided showing all DPs, reference numbers, and notes relating to each feature. The information from these plots was transferred to a final field plot where possible. Where such information would interfere with the legibility of the final plot the appropriate cartographic symbol has been transferred, but height and position number information remains on the plot, which serves as an overlay (FPM 6.1.2.5). Verified T-sheet features were retained and shown in black. Changes to the shoreline were shown in red, and new features are depicted in black. Field cartographic codes were assigned using the HDAPS DP editor. Heights are recorded in meters and are corrected to predicted MLLW. Field values have been changed after application of actual tides and shown on the smooth sheet. There were no revisions to the mean high water line. ✓

Changes and New Features

Several changes and new features were found and are depicted on the final field plot. T-sheet islets and rocks were often identified as high points of new ledges or reefs. Refer to the smooth sheet for graphic portrayal of features and revision noted on this survey. ✓

* Filed with the survey records.

Disprovals

(5)

Five T-sheet rocks were disproved at noted below:

(1) A T-sheet rock in the vicinity of 60°40'13.1"N, 147°26'48.7"W was searched for on DN 279 and not found (position 10009). Visual and echo sounder searches were conducted for 3 minutes, with a search radius of 20 meters. The water visibility was 2 meters and the area was a cobble beach.

(2) A T-sheet rock in the vicinity of 60°39'17.9"N, 147°26'06.0"W was searched for on DN 280 and not found (position 24962). Visual and echo sounder searches were conducted for 10 minutes, with a search radius of 20 meters. The water visibility was 2 meters and the average depth was 1 meters.

(3) A T-sheet rock in the vicinity of 60°39'14.9"N, 147°27'48.4"W was searched for on DN 280 and not found (position 24965). Visual and echo sounder searches were conducted for 10 minutes, with a search radius of 30 meters. The water visibility was 2 meters and the average depth was 0.5 - 1.0 meters.

(4) A T-sheet rock in the vicinity of 60°37'41.7"N, 147°28'13.7"W was searched for on DN 280 and not found (position 24968). Visual and echo sounder searches were conducted for 10 minutes, with a search radius of 50 meters. The water visibility was 5 meters and the average depth was 2 - 5 meters.

(5) A T- sheet rock in the vicinity of 60°38'56.4"N, 147°30'09.8"W was searched for on DN 286 and not found (position 1408). Visual and echo sounder searches were conducted for 5 minutes, with a search radius of 50 meters. The water visibility was 3 meters and the average depth was 25 meters.

Recommendations

The hydrographer recommends that the shoreline changes from this survey be used to supersede prior shoreline information compiled on DM-10191. Concur.

Charted Features

Charted rocks were either identified as T-sheet rocks, high points or extensions of ledges and reefs or disproved as noted below.

(from H-11762)

A charted rock in the vicinity of 60°37'27.3"N, 147°28'54.3"W was searched for on DN 280 and not found (position 5619). Visual and echo sounder searches were conducted for 10 minutes, with a search radius of 40 meters. The water visibility was 3 meters and the average depth was 3 meters.

A charted rock in the vicinity of 60°39'20.3"N, 147°29'46.7"W was searched for on DN 280 and not found (position 5629). Visual and echo sounder searches were conducted for 10 minutes, with a search radius of 40 meters. The water visibility was 4 meters and the average depth was 4 meters.

A charted rock in the vicinity of 60°39'20.9"N, 147°29'22.1"W was searched for on DN 280 and not found (position 5630). Visual and echo sounder searches were conducted for 10 minutes, with a search radius of 40 meters. The water visibility was 4 meters and the average depth was 6 meters.

A charted subm rock in the vicinity of 60°39'25.1"N, 147°29'13.6"W was searched for on DN 280 and not found (position 5631). Visual and echo sounder searches were conducted for 10 minutes, with a search radius of 40 meters. The water visibility was 4 meters and the average depth was 4 meters.

A charted rock in the vicinity of 60°37'25.9"N, 147°25'53.8"W was searched for on DN 281 and not found (position 809). Visual and echo sounder searches were conducted for 5 minutes, with a search radius of 40 meters. The water visibility was 2 - 3 meters and the average depth was 11 meters.

A charted rock in the vicinity of 60°38'37.9"N, 147°28'47.2"W was searched for on DN 286 and not found (position 1407). Visual and echo sounder searches were conducted for 5 minutes, with a search radius of 50 meters. The water visibility was 3 - 4 meters and the average depth was 15 meters. The charted rock is likely part of a ledge as shown on the smooth sheet.

A charted rock in the vicinity of 60°38'58.6"N, 147°30'13.3"W was searched for on DN 286 and not found (position 1409). Visual and echo sounder searches were conducted for 5 minutes, with a search radius of 50 meters. The water visibility was 3 meters and the average depth was 13 meters. The charted rock is likely the same feature as found by the hydrographer at latitude 60/39/01"N, longitude 147/30/14W. Smooth sheet depicts a rock which uncovers 1.4 meters at MLLW.

Recommendations

The hydrographer recommends removing the disproved rocks noted above from the chart. Chart the above areas as shown on the smooth sheet. Concur.

K. CROSSLINES

Crosslines are within 1-2 meter agreement with mainscheme hydrography except in areas of complex bathymetry. Crosslines totaled 34.9 nautical miles, representing 10.2% of the total mainscheme hydrography.

L. JUNCTIONS (See EVAL RPT., Sec. L)

This survey junctions with survey H-10579 (1:10,000, 1994) at the eastern limit, H-10578 (1:10,000,1994) at the northern limit, and H-10519 (1:20,000, 1993) at the ~~eastern~~ western limit. These soundings were found to be in general agreement with this survey.

Final comparisons will be made at the Pacific Hydrographic Section (PHS).

M. COMPARISON WITH PRIOR SURVEYS (See EVAL RPT., Sec. M)

Six prior surveys were compared: H-3028 (1:20,000, 1909-11), H-3315 (1:20,000, 1911), H-3321 (1:20,000, 1911), H-7762 (1:10,000, 1949), H-7763 (1:10,000, 1949), H-7765 (1:20,000, 1949) . Soundings from the prior surveys were in general agreement with the present survey. However, the present survey, due to much greater sounding density, revealed numerous shoal soundings not found during the prior surveys. There were no instances where prior survey soundings were shoaler in a corresponding area.

Final comparisons will be made at PHS.

N. ITEM INVESTIGATIONS

One AWOIS item was assigned to survey H-10580

AWOIS ITEM 52125

1. Area of Investigation

State:	Alaska
Locality:	Prince William Sound
Reported Latitude:	60°39'21.80"N
Reported Longitude:	147°27'25.15"W
Datum:	NAD27
Depth:	Unknown
Feature:	Uncharted Rock (charted on chart 16705 as "Obstn Rep (1979) PA")

2. Description of Source Item

NM report; A rock was discovered at high tide by the R.V. Acona in position 60°39.4"N, 147°27.3"W (NAD27). The report does not state that the vessel struck the rock, however it states the draft of the vessel as being 12 feet.

3. Survey Requirements

Verify or disprove, determine least depth and position. Techniques to be used are echo sounder search or 200% side scan sonar. ✓

4. Method of Investigation

A visual search was conducted on DN 300 at low water for 15 minutes in a 200 meter radius . In addition 10, 25 and 50 meter line spacing was conducted in the area. ✓

5. Results of Investigation

A shoal of 5.8 m (3 FM) was found at 60°39'20.766"N, 147°27'21.069"W (position 4178 +3). To the west of the reported area, a shoal of 2.2 m (1 FM) was found at 60°39'26.425"N, 147°27'50.793"W (position 4190 +2). In addition, a shoal of 2.8 m (1 1/2 FM) was found to the east of the reported area, at 60°39'19.311"N, 147°26'49.924"W (position 10512 + 0). ✓

6. Comparison with Prior Surveys ✓

This item was compared to H-3315 (1:20,000, 1911). The prior survey revealed no indication of the reported shoal area.

7. Comparison of with the Chart and Charting Recommendations ✓

The item was compared to NOS chart 16705, 15th Edition, Sept. 1, 1990, 1:80,000 (NAD83).

Recommendation

The hydrographer recommends that present survey soundings be used to supersede charted soundings and remove charted Obstn Rep (1974) PA. The 2.2 m (1 FM) depth (position 4190 + 2) and the 2.8 m (1 1/2 FM) depth (position 10512 + 0) were submitted as dangers to navigation. ✓ concur.

O. COMPARISON WITH THE CHART (See EVAL RPT., Sec. O)

This survey was compared to NOS chart 16705, 15th Edition, Sept. 1,1990, 1:~~18~~80,000 (NAD83). The charted soundings were found to be in general agreement with the present survey. Non-sounding features are discussed in Section J, Shoreline. ✓

Final comparisons will be made at PHS.

Dangers to Navigation

Thirty-eight dangers to navigation within the limits of this survey were reported to the Seventeenth Coast Guard District on November 9, 1994. Copies of the correspondence ~~can be found in Appendix I of~~ are attached to this report.

P. ADEQUACY OF SURVEY

Prior to final approval, survey H-10580 is complete and adequate to supersede charted depths and features in their common areas. concur.

Q. AIDS TO NAVIGATION

Two mooring buoys were located within the survey boundaries. Detailed information is located in Appendix VI.* The two buoys were reported to the Seventeenth Coast Guard District for inclusion in the Local Notice to Mariners by letter dated November 9, 1994. Copies of the correspondence ~~can be found in Appendix VI.~~ are attached to this report.

R. STATISTICS

Vessel:	2120	2122	2123	2124	2125	Total
Number of Positions	530	7806	1418	1950	1327	13031
NM Hydrography	106	137	205	198	202	848

Velocity Casts	3
Detached Positions	45
Bottom Samples	57
Tide Stations	2
NM^2 Hydrography	17.3

S. MISCELLANEOUS

Bottom samples were collected in accordance with Project Instructions.

No tidal current predictions are available within the sheet limits.

No unusual magnetic variations were noted.

T. RECOMMENDATIONS

None

* Filed with the survey data

U. REFERRAL TO REPORTS ✓

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

Title	Date Sent	Office
Fall 1994 Horizontal Control Report for OPR-P125-RA	November 1994	N/CG245
Fall 1994 Coast Pilot Report for OPR-P125-RA	November 1994	N/CG245
Project related data for OPR-P125-RA	Incremental	N/CG245

Respectfully Submitted,

Joel R. Becker
Ensign, NOAA

Approved and Forwarded,

Russell C. Arnold
Captain, NOAA
Commanding Officer

CONTROL STATIONS as of 8 Nov 1994

	No	Type	Latitude	Longitude	H	Cart	Freq	Vel	Code	MM/DD/YY	Station Name
	101	G	060:50:49.581	147:27:05.696	13	250	0.0	0.0		09/04/94	QUOTE 1947(DGPS)
	102	G	060:54:23.798	147:12:24.812	5	250	0.0	0.0		09/04/94	EXIT 1947(DGPS)
	103	G	060:56:36.616	147:03:24.109	6	250	0.0	0.0		09/05/94	ELF 1947(DGPS)
	104	G	060:42:51.179	147:21:43.053	16	250	0.0	0.0		10/04/94	LUMPY 1947(DGPS)
	105	G	060:14:18.000	146:38:48.000	0	250	0.0	0.0		10/04/94	CAPE HINCHINBROOK(DGPS BEACON)
	106	G	061:03:00.000	146:42:00.000	0	250	0.0	0.0		10/04/94	POTATO PT(DGPS BEACON)
*	107	G	060:37:06.009	147:29:09.075	8	250	0.0	0.0		10/04/94	TUFT 1905(DGPS)

* Control station plots on the smooth sheet but not used during this survey.

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

November 9, 1994

ADVANCE INFORMATION

Commander
Seventeenth Coast Guard District
Post Office Box 25517
Juneau, Alaska 99802

Dear Sir:

NOAA Ship RAINIER has located thirty-eight dangers to navigation in Northwest Prince William Sound (Project OPR-P125-RA) within the limits of hydrographic survey H-10580. The attached information is provided for publication 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,

Russell C. Arnold
Captain, NOAA
Commanding Officer

Attachments

cc: DMAHTC
N/CG221
PMC

Hydrographic Survey Registry Number: H-10580

ADVANCE INFORMATION

Survey Title: State: Alaska
Locality: Northwest Prince William Sound
Sublocality: Vicinity of West Naked Island

Project Number: OPR-P125-RA

Survey Date: October - November 1994

Features are reduced to mean lower low water using predicted tides.

Affected Nautical Charts:

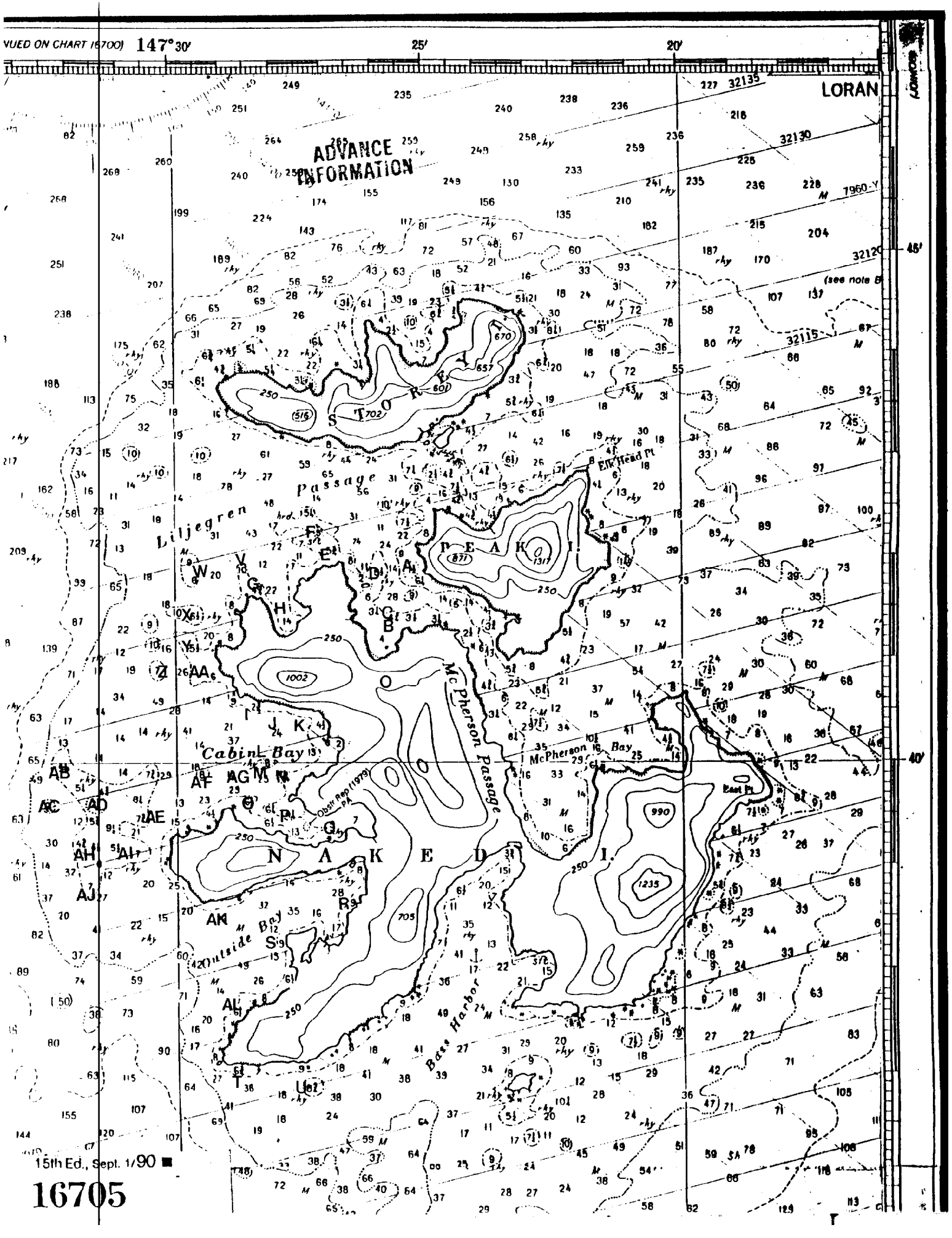
Chart	Edition/Date	Scale	Datum
16700	24th Ed., 1/11/92	1:200,000	NAD83
16705	15th Ed., 9/1/90	1:80,000	NAD83

	Danger to Navigation	Latitude (N)	Longitude (W)	Pos #	Depth (m)
A.	Shoal, covers 1 FM	60° 41' 49.4"	147° 25' 20.5"	3680^{+4}	1^{9}
B.	Shoal, covers 2 3/4 FM	60° 41' 16.7"	147° 25' 46.1"	2092^{+2}	5^{3}
C.	Shoal, covers 3 3/4 FM	60° 41' 24.4"	147° 25' 48.6"	2080^{+2}	6^{9}
D.	Shoal, covers 3 1/4 FM	60° 41' 47.5"	147° 25' 59.3"	2154	6^{3}
E.	Shoal, covers 3 1/2 FM	60° 42' 02.3"	147° 26' 44.0"	3784^{+0}	6^{5}
F.	Shoal, covers 2 FM	60° 42' 13.2"	147° 27' 11.9"	3920^{+3}	3^{9}
G.	Shoal, covers 4 1/4 FM	60° 41' 46.8"	147° 28' 27.9"	5613^{+4}	8^{2}
H.	Shoal, covers 5 1/2 FM	60° 41' 31.9"	147° 27' 53.2"	3994^{+4}	10^{1}
I.	Shoal, covers 4 1/2 FM	60° 40' 28.8"	147° 28' 28.3"	10059^{+0}	8^{5}
J.	Shoal, covers 9 FM	60° 40' 15.1"	147° 27' 50.8"	4052^{+4}	16^{9}
K.	Shoal, covers 5 1/2 FM	60° 40' 16.0"	147° 27' 27.4"	11244^{+1}	10^{3}
L.	Shoal, covers 4 1/4 FM	60° 40' 04.7"	147° 28' 11.5"	4014^{+8}	8^{c}
M.	Shoal, covers 4 1/4 FM	60° 39' 58.1"	147° 28' 12.8"	4016^{+5}	8^{c}
N.	Shoal, covers 3 FM	60° 39' 51.6"	147° 27' 55.9"	10749^{+0}	5^{5}
O.	Shoal, covers 2 1/2 FM	60° 39' 27.5"	147° 28' 14.9"	4127^{+6}	4^{8}
P.	Shoal, covers 1 FM	60° 39' 26.4"	147° 27' 50.8"	4190^{+2}	2^{2}
Q.	Shoal, covers 1 1/2 FM	60° 39' 19.3"	147° 26' 49.9"	10512^{+0}	2^{8}
R.	Shoal, covers 3 1/2 FM	60° 38' 31.6"	147° 26' 47.1"	4252^{+4}	6^{c}
S.	Shoal, covers 4 FM	60° 38' 18.1"	147° 28' 14.7"	1946^{+4}	7^{7}
T.	Shoal, covers 5 1/4 FM	60° 36' 55.9"	147° 28' 29.5"	1397^{+4}	9^{8}
U.	Shoal, covers 6 3/4 FM	60° 36' 50.9"	147° 27' 24.3"	1308^{+7}	12^{8}
V.	Shoal, covers 3 3/4 FM	60° 41' 49.3"	147° 28' 46.6"	4907^{+1}	7^{0}

	Danger to Navigation	Latitude (N)	Longitude (W)	Pos #	Depth (m)
W.	Shoal, covers 6 1/4 FM	60° 41' 45.8"	147° 29' 38.1"	4931	11
X.	Shoal, covers 5 1/4 FM	60° 41' 26.1"	147° 29' 40.0"	4951	10
Y.	Shoal, covers 4 3/4 FM	60° 41' 05.6"	147° 29' 41.6"	4971	8
Z.	Shoal, covers 6 1/2 FM	60° 40' 53.6"	147° 30' 24.2"	5041	12
AA.	Shoal, covers 5 1/4 FM	60° 40' 50.3"	147° 29' 37.7"	5021	9
AB.	Shoal, covers 5 FM	60° 39' 58.2"	147° 32' 18.0"	4773	9
AC.	Shoal, covers 6 1/2 FM	60° 39' 32.4"	147° 32' 29.3"	4737	12
AD.	Shoal, covers 2 FM	60° 39' 36.8"	147° 31' 36.3"	4837	4
AE.	Shoal, covers 7 FM	60° 39' 38.2"	147° 30' 44.6"	4621	13
AF.	Shoal, covers 5 3/4 FM	60° 39' 56.5"	147° 29' 32.9"	4382	10
AG.	Shoal, covers 4 1/4 FM	60° 39' 53.8"	147° 28' 43.5"	4421	8
AH.	Shoal, covers 4 FM	60° 39' 10.8"	147° 31' 38.7"	6482	7
AI.	Shoal, covers 5 1/4 FM	60° 39' 06.0"	147° 30' 46.3"	4645	10
AJ.	Shoal, covers 6 3/4 FM	60° 38' 48.1"	147° 31' 42.8"	6427	12
AK.	Shoal, covers 10 FM	60° 38' 22.7"	147° 29' 03.8"	6711	18
AL.	Shoal, covers 5 FM	60° 37' 49.7"	147° 28' 45.8"	3569	9

Questions concerning this report should be directed to the Chief, Pacific Hydrographic Section at (206) 526-6835.

ADVANCE INFORMATION



15th Ed., Sept. 1/90 ■

16705

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

November 9, 1994

ADVANCE
INFORMATION

Commander
Seventeenth Coast Guard District
Post Office Box 25517
Juneau, Alaska 99802

Dear Sir:

NOAA Ship RAINIER has positioned four privately maintained mooring buoys in Northwest Prince William Sound (Project OPR-P125-RA) within the limits of hydrographic surveys H-10579 and H-10580. The attached information is provided for publication in the Local Notice to Mariners for the Seventeenth Coast Guard District. A copy of the chart showing the areas in which the buoys exist is also attached.

Sincerely,

Russell C. Arnold
Captain, NOAA
Commanding Officer

Attachments

cc: DMAHTC
N/CG221
PMC

Hydrographic Survey Registry Number: H-10579

Survey Title: State: Alaska
Locality: Northwest Prince William Sound
Sublocality: Vicinity of East Naked Island and Southern Portion of Peak Island

Project Number: OPR-P125-RA

Survey Date: October 1994

ADVANCE INFORMATION

Hydrographic Survey Registry Number: H-10580

Survey Title: State: Alaska
Locality: Northwest Prince William Sound
Sublocality: Vicinity of West Naked Island

Project Number: OPR-P125-RA

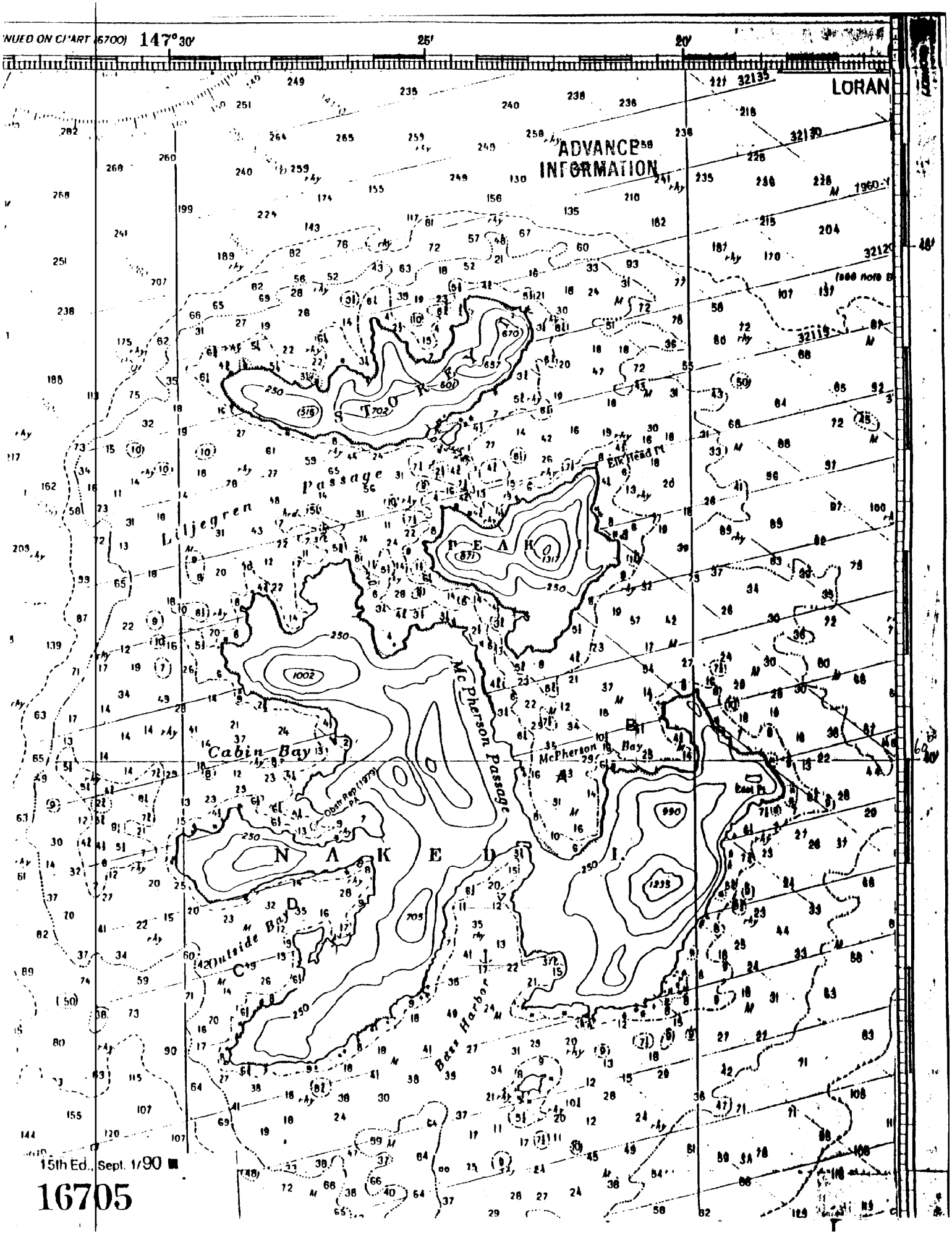
Survey Date: October - November 1994

Affected Nautical Charts:

Chart	Edition/Date	Scale	Datum
16700	24th Ed., 1/11/92	1:200,000	NAD83
16705	15th Ed., 9/1/90	1:80,000	NAD83

	Aid to Navigation	Latitude (N)	Longitude (W)	Position #
A.	Mooring buoy, FL 2.5 sec	60° 39' 54.1"	147° 22' 33.7"	3106
B.	Mooring buoy, FL 2.5 sec	60° 40' 20.0"	147° 21' 10.5"	3926
C.	Mooring buoy, unlit	60° 38' 05.3"	147° 28' 45.5"	5625
D.	Mooring buoy, unlit	60° 38' 34.3"	147° 27' 49.9"	1938

Questions concerning this report should be directed to the Chief, Pacific Hydrographic Section at (206) 526-6835.


ADVANCE INFORMATION
LORAN
Liljegren Passage
PEAK
Elk Head Pt
McPherson Passage
McPherson Bay
Cabin Bay
Obstr Rep (1979)
NAKED I.
Outside Bay
Base Harbor
147°30'
25'
20'

Sec Q Insert
Alyeska Corp Mooring Buoy Summary

All terminal buoys are maintained by Alyeska Corp.
Installed in the summer of 1989 in Outside Bay for the Spill Response Tugs and Barges
Mooring Buoys are white cylindrical buoys with a blue stripe, non-lighted
Horizontal axis, x ft in diameter and x ft long.

Name	Pos. #	Latitude			Longitude			Characteristics
#1	5625	60	38	05.32	147	28	45.55	Mooring buoy
#2	1938	60	38	34.28	147	27	49.94	Mooring buoy

APPROVAL SHEET

for

H-10580
RA-10-~~15~~20-94

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.

Russell C. Arnold
Captain, NOAA
Commanding Officer

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Office of Ocean and Earth Sciences
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

ORIGINAL

DATE: January 17, 1995

HYDROGRAPHIC SECTION: Pacific

HYDROGRAPHIC PROJECT: OPR-P125-RA

HYDROGRAPHIC SHEET: H-10580

LOCALITY: Vicinity of West Naked Island, Prince William Sound, Alaska

TIME PERIOD: October 4 - November 2, 1994

TIDE STATION USED: 945-4571 North Side of Storey Island, Ak.
Lat. 60° 43.9'N Lon. 147° 26.2'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): -6.33 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 11.2 ft.

REMARKS: RECOMMENDED ZONING

Times and heights are direct on North Side of Storey Island, Ak. (945-4571).

Notes: 1. Times are tabulated in Greenwich Mean Time.

2. Data for North Side of Storey Island, Ak. (945-4571) are temporarily stored in file #745-4571.

CHIEF, DATUMS SECTION

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-10580

Name on Survey	A ON CHART NO. 16705	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		X							1
BASS HARBOR	X		X							2
CABIN BAY	X		X							3
LILJEGREN PASSAGE	X		X							4
MCPHERSON PASSAGE	X		X							5
NAKED ISLAND	X		X							6
OUTSIDE BAY	X		X							7
PEAK ISLAND	X		X							8
PRINCE WILLIAM SOUND	X		X							9
										10
										11
										12
										13
										14
										15
										16
										17
										18
				Approved:						19
				Chief Geographer						20
										21
				OCT 4 1995						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-10580

RECORDS ACCOMPANYING SURVEY: To be completed when survey is processed

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

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

SHORELINE DATA

SHORELINE MAPS (List):	DM-10191
PHOTOBATHYMETRIC MAPS (List):	N/A
NOTES TO THE HYDROGRAPHER (List):	None
SPECIAL REPORTS (List):	None
NAUTICAL CHARTS (List):	16705, 15th Edition, September 1, 1990

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			13031
POSITIONS REVISED			
SOUNDINGS REVISED			
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	27.0		27.0
VERIFICATION OF SOUNDINGS			
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION VERIFICATION			
COMPILATION OF SMOOTH SHEET	212.5		212.5
COMPARISON WITH PRIOR SURVEYS AND CHARTS			
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		26.0	26.0
GEOGRAPHIC NAMES			
OTHER*			
*USE OTHER SIDE OF FORM FOR REMARKS — TOTALS	239.5	26.0	265.5

Pre-processing Examination by: LT G. Noll, LT M. Larsen	*Beginning Date*: 11/14/94	*Ending Date*: 12/13/94
Verification of Field Data by: D. Doles, D.Deodato, G.Kay, R. Mayor	*Time (Hours)*: 217.5	*Ending Date*: 11/09/95
Verification Check by: J. Stringham	*Time (Hours)*: 22.0	*Ending Date*: 9/11/95
Evaluation and Analysis by: I. Almacen	*Time (Hours)*: 26.0	*Ending Date*: 11/21/95
Inspection by: B. Olmstead	*Time (Hours)*: 18	*Ending Date*: 12/09/95

EVALUATION REPORT

H-10580

A. PROJECT

Project information is discussed in the hydrographer's report.

B. AREA SURVEYED

This survey was conducted in Alaska, in the northwestern part of Prince William Sound. It covers the area around the western coast of Naked Island including Cabin Bay, Outside Bay and the approach to Bass Harbor. The coast is generally comprised of ledges, reefs, and some isolated off-lying rocks and islets. Rocky pinnacles that rise up very near the surface were found throughout the survey area. The bottom is made up of sand, gravel and mud mixed with shells. Depths range from 0.0 to 311.0 meters.

C. SURVEY VESSELS

Survey vessel information is found in the hydrographer's report.

D. AUTOMATED DATA ACQUISITION AND PROCESSING

Survey data were processed using the same Hydrographic Data Acquisition/Processing System (HDAPS) software used by the hydrographer, the Hydrographic Processing System (HPS) and AutoCad, Version 12.

At the time of the survey certification the format for transmission of digital data had not been formally approved. In the interim, digital data for this survey exists in the standard HPS format which is a database format using the .dbf extension. In addition, the sounding plot, created with .dbf (extension) and enhanced using the AutoCad system, is filed both in the AutoCad drawing format, i.e., .dwg (extension); and in the more universally recognized graphics transfer format, .dxf (extension). Copies of these files will be retained at PHS until data transfer protocols are developed and improved.

The drawing files necessarily contain information which is not part of the HPS data set such as geographic names text, line-type data, and minor symbolization. In addition, those soundings deleted from the drawing for clarity purposes, remain unrevised in the HPS digital files to preserve the integrity of the original hydrographic data set. Cartographic codes used to describe the digital data are those authorized by the Hydrographic Survey Guideline No. 75.

The field sheet parameters have been revised to center the hydrography on the office plot. Data is plotted using a Modified Transverse Mercator projection and are depicted on a

single sheet.

E. SONAR EQUIPMENT

Side scan sonar was not used on survey H-10580.

F. SOUNDING EQUIPMENT

Sounding equipment is discussed in the hydrographer's report.

G. CORRECTIONS TO SOUNDINGS

The sounding data have been reduced to Mean Lower Low Water (MLLW). The reducers include corrections for actual tide, dynamic draft, and sound velocity. These reducers have been reviewed and are consistent with present NOS specifications. Actual tide reduction is derived from North Side of Storey Island, Alaska gage (945-4571). Refer to the approved tide note attached to this report concerning recommended tidal zoning.

H. CONTROL STATIONS

Sections H and I of the hydrographer's descriptive report contain adequate discussions of horizontal control and the hydrographic positioning. The positions of horizontal control stations used during hydrographic operations are published values based on NAD 83. The geographic positions of all survey data are also based on NAD 83. The AutoCAD generated smooth sheet is annotated with an NAD27 adjustment tick based on values determined with NGS program NADCON.

Data based on NAD 27 may be referenced to this survey by applying the following corrections:

Latitude: -2.702 seconds (-83.579 meters)
Longitude: 7.288 seconds (124.649 meters)

The year of establishment of the control stations shown originates with the horizontal control records and the hydrographer's signal list.

I. HYDROGRAPHIC POSITION CONTROL

Differential GPS (DGPS) was used to control this survey. There are a few positions where the maximum allowable horizontal dilution of precision (HDOP) limits of 3.75 have been exceeded during this survey. A review of the data, however, shows that the positioning of soundings located by these fixes is consistent with the surrounding information and is considered acceptable. These positions are isolated and occur randomly throughout the survey. None of these survey positions are used to locate critical soundings and dangers to

navigation. Daily DGPS performance checks were conducted in the field and found adequate.

J. SHORELINE

The following digitally compiled shoreline map on NAD83 datum applies to this survey.

Map Number	Date of Photography	Scale
DM-10191	June 1994	1:20,000

Shoreline changes and new features in the area were noted during this survey. Most of the islets and rocks depicted on the map were identified in the field as reefs or high points of newly located ledges. These features have been adequately depicted on the AutoCad generated smooth sheet based on the latest survey information. Further discussions concerning shoreline changes noted during this survey is included in the hydrographer's report. There were no changes to the mean high water line.

K. CROSSLINES

Crosslines are discussed in the hydrographer's report.

L. JUNCTIONS

Survey H-10580 junctions with the following surveys.

Survey	Year	Scale	Area
H-10519	1993-94	1:20,000	West
H-10578	1994	1;20,000	North
H-10579	1994	1:10,000	East

The junctions with the above listed surveys are complete. The depth curves and soundings within the junction areas are in satisfactory agreement.

M. COMPARISON WITH PRIOR SURVEYS

Survey H-10580 was compared with the following prior surveys.

H-3028 (1909), scale 1:20,000
H-3315 (1911), scale 1:20,000
H-3321 (1911), scale 1:20,000
H-7762 (1949), scale 1:10,000
H-7763 (1949), scale 1:10,000
H-7765 (1949), scale 1:20,000

Comparisons with the above listed prior surveys are considered satisfactory. However, the present survey appears to be generally shoaler from 1-5 meters (0.5-2.5 fathoms)in most areas. Survey H-10580 was accomplished with greater sounding density utilizing more modern positioning and sounding methods and as a result revealed more shoals not found during the earlier surveys. Some of the other changes in the bottom configuration of the area are attributed in part to the effects of the 1964 Alaska earthquake. Comparisons with the prior surveys seems to indicate a trend of uplifting within this portion of Prince William Sound.

The following islets and rocks charted along the coast north of the entrance to Bass Harbor originating from survey H-3321 (1911) were not mentioned in the hydrographer's report. However, these shoreline features were not depicted on the latest shoreline map of the area. It appears that these features were charted further offshore to depict the ledges extending from the shoreline. It is recommended that these features be deleted and the newly compiled shoreline features in the area be depicted on the latest edition of the chart.

Feature	Latitude (N)	Longitude (W)
Islet	60/37/03	147/27/28
Islet	60/37/10	147/26/59
Rock awash	60/37/12	147/26/53
Rock awash	60/37/19	147/26/36

H-10580 is adequate to supersede the prior surveys within the common area.

N. ITEM INVESTIGATIONS

AWOIS item #52125 was investigated during this survey. Discussion and disposition of this item is included in the hydrographer's report.

O. COMPARISON WITH CHART

Survey H-10580 was compared with the following charts.

Chart	Edition	Date	Scale	Datum
16705	15th	Sept. 1, 1990	1:80,000	NAD83
16700	24th	Jan. 11, 1992	1:200,000	NAD83

a. Hydrography

Charted hydrography originates with the previously mentioned prior surveys and requires no further discussion.

The presently charted islet at latitude 60/37/06N, longitude 147/29/12W, appears to have

been exaggerated in size and portrayal. The present survey depicts the area as part of an extended point of land surrounded with ledges. It is recommended that this area be depicted on the chart based on the present survey.

Survey H-10580 is adequate to supersede charted hydrography within the common area of coverage.

P. ADEQUACY OF SURVEY

The hydrography on survey H-10580 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.

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 Procedure Manual, April 1994 Edition.

Survey H-10580 adequately complies with the project instructions.

Q. AIDS TO NAVIGATION

There are two mooring buoys maintained by the Alyeska Corporation and situated within the survey area. These buoys were located and have been reported to the USCG for inclusion in the Local Notice to Mariners on November 9, 1994. A copy of the correspondence concerning these aids is attached to this report.

R. STATISTICS

Statistics are itemized in the hydrographer's report.

S. MISCELLANEOUS

Miscellaneous information concerning this survey is discussed in the hydrographer's report. Thirty-eight (38) dangers to navigation were reported to the USCG, DMAHTC, and N/CG221, on November 9,1994 and a copy of the report is attached. No additional dangers were found during office processing.

T. RECOMMENDATIONS

Survey H-10580 is a good hydrographic survey and no additional field work is required.

U. REFERRAL TO REPORTS

Referral to reports is discussed in the hydrographer's report.

Isagani A. Almacen
Cartographer

APPROVAL SHEET
H-10580

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.

Bruce A. Olmstead Date: 12/9/95
Bruce A. Olmstead
Senior Cartographer, Cartographic Section
Pacific Hydrographic Branch

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.

Kathy Timmons Date: 12/11/95
Kathy Timmons
Commander, NOAA
Chief, Pacific Hydrographic Branch

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Final Approval

Approved:

Andrew A. Armstrong III Date: 2/22/96
Andrew A. Armstrong III
Captain, NOAA
Chief, Hydrographic Surveys Division

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-10580

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
16705	1/9/96	ALMACEN	Full ~~Part Before~~ After Marine Center Approval ~~Signed Via~~ Full application of
			Drawing No. sndgs. & features from SS.
16700	1/16/96	ALMACEN	Full ~~Part Before~~ After Marine Center Approval ~~Signed Via~~ Full application of
			Drawing No. sndgs. & features from SS thru CHT 16705.
			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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			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED