H10514

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-10-24-93

Registry No. H-10514

LOCALITY

State Alaska

General Locality Prince William Sound

Sublocality Southern Portion of Eaglek Bay

1993

CHIEF OF PARTY
Captain Russell C. Arnold, NOAA

☆U.S. GOV. PRINTING OFFICE: 1987—785-739

NOAA FORM 77-28 (11-72)

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

HYDROGRAPHIC TITLE SHEET

REGISTER NO. H-10514

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-10-24-93

State: Alaska

General locality: Prince William Sound

Locality: Southern Portion of Eaglek Bay

Scale: 1:10,000 Date of survey: Oct. 5 - Oct. 25, 1993

Instructions dated: July 17, 1993; Change #1 - 8/25/93 * Project No. OPR-0125-RA

Vessel: RAINIER 2120, 2123, 2124, 2125, 2126

Chief of party: CAPT R.C. Arnold, NOAA

Surveyed by: CAPT R. Arnold, LT M.Brown, LTJG S.Lemke, ENS D.Pitts, ENS J.Graham, ENS A.Caron, ENS G. Glover, ENS S. Smith

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

Graphic record scaled by: RAINIER Personnel

Graphic record checked by: RAINIER Personnel

Verification by: ~~Protracted by~~ S. Otsubo, O. Doles, K. Mayor, L. Deodato Automated plot by: PHS Xynetics Plotter

Evaluation by: ~~Verification by~~ G. Kay

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

REMARKS: * Change #2, Sept. 2, 1993

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.

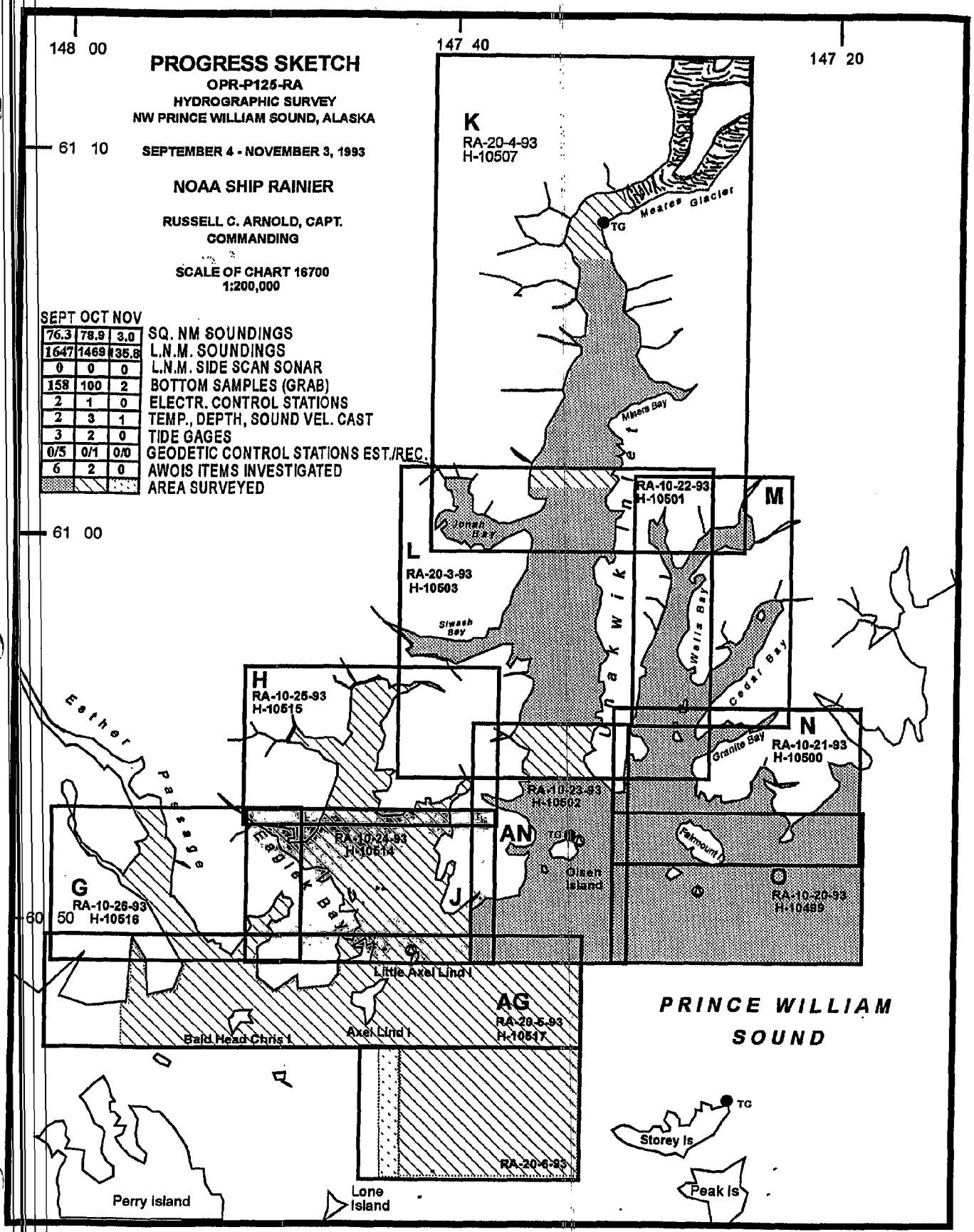
All depths listed in this report are referenced to mean lower low water unless otherwise noted.

Surf & Arrows check 6/21/95 MCR

1-2-97
Sa 4-4-95

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

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


148 00
147 40
147 20
61 10
61 00
60 50
PROGRESS SKETCH
OPR-P125-RA
HYDROGRAPHIC SURVEY
NW PRINCE WILLIAM SOUND, ALASKA
SEPTEMBER 4 - NOVEMBER 3, 1993
NOAA SHIP RAINIER
RUSSELL C. ARNOLD, CAPT.
COMMANDING
SCALE OF CHART 16700
1:200,000
SEPT OCT NOV
76.3 78.9 3.0 SQ. NM SOUNDINGS
1647 1469 35.8 L.N.M. SOUNDINGS
0 0 0 L.N.M. SIDE SCAN SONAR
158 100 2 BOTTOM SAMPLES (GRAB)
2 1 0 ELECTR. CONTROL STATIONS
2 3 1 TEMP., DEPTH, SOUND VEL. CAST
3 2 0 TIDE GAGES
0/5 0/1 0/0 GEODETIC CONTROL STATIONS EST./REC.
6 2 0 AWOIS ITEMS INVESTIGATED
AREA SURVEYED
K
RA-20-4-93
H-10507
Meares Glacier
TG
Meares Bay
RA-10-22-93
H-10501
M
Jonah Bay
L
RA-20-3-93
H-10503
Siwash Bay
Unakwik Inlet
Wells Bay
Cedar Bay
H
RA-10-25-93
H-10515
Esther Passage
N
Granite Bay
RA-10-21-93
H-10500
RA-10-23-93
H-10502
RA-10-24-93
H-10514
Eaglek Bay
AN
TG
Olsen Island
Fairmount I
J
G
RA-10-26-93
H-10516
RA-10-20-93
H-10499
Little Axel Lind I
AG
RA-20-5-93
H-10517
Bald Head Chris I
Axel Lind I
PRINCE WILLIAM
SOUND
TG
Storey Is
RA-20-6-93
Perry Island
Lone
Island
Peak Is

Descriptive Report to Accompany Hydrographic Survey H-10514

Field Number RA-10-24-93
Scale 1:10,000
October 1993

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

A. PROJECT

This basic hydrographic survey was completed in northwest Prince William Sound, Alaska, as specified by Project Instructions OPR-P125-RA dated July 19, 1993, change No. 1 dated August 25, 1993, and change No. 2 dated September 2, 1993.

Survey H-10514 corresponds to "Sheet J" as defined in the Project Instructions.

This survey will provide contemporary hydrographic survey data for updating existing nautical charts, and for constructing two new 1:100,000 scale metric charts covering the fiords and bays of northwest Prince William Sound. Requests for hydrographic surveys and updated charts have been received from the Defense Mapping Agency, Southwest Alaska Pilot's Association, cruise ship lines (in particular Holland America Line and Westours, Inc.), and local fishermen.

B. AREA SURVEYED

This survey area is located in southern Eaglek Bay, including Derickson Bay and Schoppe Bay. The survey's northern and southern extent are 60°52'45"N and 60°49'00"N respectively. The survey extends west to 147°49'30"W, and east to Point Pellew at 147°38'45"W.

Data acquisition was conducted from October 5, Day Number (DN) 278, through October 25, DN 298.

C. SURVEY VESSELS

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

Vessel	EDP No	Operation
RAINIER	2120	Sound Velocity Cast Bottom Samples
RA-3	2123	Hydrography Shoreline Verification
RA-4	2124	Hydrography Shoreline Verification
RA-5	2125	Hydrography Shoreline Verification Bottom Samples

RA-6 2126 Hydrography
Shoreline Verification ✓

D. AUTOMATED DATA ACQUISITION AND PROCESSING

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

Program Name	Version	Date Installed
AUTOST	3.00	9/24/92
BACKUP	2.00	8/20/93
BASELINE	1.14	8/20/93
BIGABST	2.05	8/20/93
BLKEDIT	2.02	8/20/93
CARTO	2.09	8/20/93
CONVERT	3.54	8/20/93
DAS_SURV	6.42	8/20/93
DP	2.14	8/20/93
EXCESS	4.11	8/20/93
FILESYS	3.10	8/20/93
GRAFEDIT	1.04	8/20/93
LSTAWOIS	3.04	8/20/93
LISTDATA	1.02	8/20/93
MAINMENU	1.10	8/20/93
MAN_DATA	2.01	8/20/93
NEWPOST	6.01	8/20/93
PLOTALL	2.12	8/20/93
PRESURV	7.04	8/20/93
PRINTOUT	4.03	8/20/93
QUICK	2.04	8/20/93
RAMSAVER	1.02	8/20/93
REAPPLY	2.03	8/20/93
SYMBOLS	2.00	9/24/92
ZOOMEDIT	2.12	8/20/93

✓

Velocity corrections were determined using:

Program Name	Version	Date Installed
VELOCITY	2.0	24 Mar 1993

✓

E. SONAR EQUIPMENT

Sonar equipment was not used on sheet J.

✓

F. SOUNDING EQUIPMENT

DSF-6000N serial numbers are included on the headers of the daily Raw Master Printouts. No problems which affect survey data were encountered. All 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 cast listed below:

Velocity Table No.	Cast No.	Deepest Depth (m)	Applicable DN	Cast Position	Day
3	3	472	278-298	60°49'24"N 147°39'14"W	293

The sound velocity cast was acquired with SBE SEACAT Profiler S/N 220.

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 is included in the "Separates to be Included with Survey Data, IV. Sounding Equipment Calibrations and Corrections". filed with the survey records.

Static Draft

A transducer depth was determined for launches 2123, 2124, 2125 and 2126 on March 19, 1993 and is in the offset tables for each launch.

Settlement and Squat

Correctors were computed in accordance with Hydrographic Manual Section 4.9.4.2., using FPM Fig. 2.2 and 2.3, and are included with project data for OPR-P125-RA. The data used was collected in Shilshole Bay, Washington on March 11, 16, and 18 of 1992. Revised settlement and squat correctors were received from Pacific Marine Center on October 21, 1992. Authorization was obtained from N/CG241 to use the 1992 data. These revised correctors were applied to the data on sheet J.

Offset Tables

Vessel	Offset Table No.
2123	3
2124	4
2125	5
2126	6

Heave

Data were not acquired during periods of significant sea action for sheet J.

Bar Check and Lead Lines

Bar check and lead lines were calibrated by RAINIER personnel on February 19, 1993 at PMC. Calibration forms are included with the project data for OPR-P125-RA.

Tide Correctors

The tidal reference station used for this survey was Cordova, Alaska (945-4050). Tidal correctors as

provided in the project instructions for Sheet J are:

Time Correction				Height Correction
High Water		Low Water		Range Ratio
0 hr	0 min	0 hr	0 min	X0.96

HDAPS listings of the data used in generating tide corrector tables are ~~included in Appendix V of this report~~. filed with the survey records.

Tide gages were installed and maintained by RAINIER personnel at Storey Island, Alaska (945-4553) and Olsen Island, Alaska (945-4596). The control station was Valdez, Alaska (945-4240). Opening levels for the Valdez station were completed by the Pacific Operations Section. Requirements for closing levels were waived in Change No. 1 of the Project Instructions.

The station descriptions, field tide records, and Field Tide Notes will be forwarded to N/OES212 monthly in accordance with HSG 50 and FPM 4.3, and at the end of the project. Requests for approved tides will be forwarded to N/OES2.

H. CONTROL STATIONS

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

Positions for all existing stations are from the National Geodetic Survey (NGS) data base. Horizontal datum for all control stations is NAD 83. All existing stations were recovered in accordance with methods stated in Section 5.2.4 of the Field Procedures Manual. Further information can be found in the "Fall 1993 Horizontal Control Report for OPR-P125-RA."

I. HYDROGRAPHIC POSITION CONTROL

Method of Position Control

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

Calibrations & Systems Check Methods

Ashtech GPS

VHF differential shore stations were established at stations AXEL and INDIA. After the stations were established, a remote sensor was connected directly to the MXII shore station and its antenna was collocated with the shore station. The computed position was transmitted back to the ship via VHF radio modem link. 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 either station.

System checks were performed by launch to launch comparisons of position. Three observations of position were made by each launch using correctors from two independent DGPS base stations. System checks were made every day and 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". filed with the survey records.

Problems

The differential GPS stations on AXEL and INDIA ran without problems for sheet J. ✓

Offset

The launch GPS antenna offsets are stored in the HDAPS Offset Tables as listed in Section G. Copies of the Offset Tables are included in the "Separates to be Included with Survey Data, III. Horizontal Position Control and Corrections to Position Data." filed with the survey records.

J. SHORELINE

The shoreline maps (T-sheets) used to transfer shoreline detail to the final sheets were expansions of DM-10059, DM-10064 (1:20,000, NAD 83).

Shoreline verification was conducted as near as possible to predicted lower low water in accordance with FPM 7.1, however tides were not ideal for shoreline verification during the survey period. RAINIER conducted shoreline verification at the lowest possible tides during this survey. Shoreline verification was accomplished by 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 general agreement. ✓

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, 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. ✓

Detailed 1:10,000 "Rough 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. Verified T-sheet features were retained and shown in black. Changes to the shoreline were shown in red. Field cartographic codes were assigned using the HDAPS DP editor. Heights are recorded in meters and are corrected to predicted MLLW. ✓

Disprovals

The T-sheet rock in the vicinity 60°52'37"N, 147°48'53"W, Position Number (PN) 8304, was not found. The area was searched in a 100 meter radius, visually and with the echo sounder for 10 minutes. The average depth was 1.9 meters and clear to the bottom in all directions. No rocks were seen. The search area was surrounded by a gravel shoal. Chart areas as shown on Smooth Sheet. ✓

Three T-sheet rocks in the vicinity 60°52'12"N, 147°48'44"W, PN 8311, were not found. The area was investigated at high and low water. The DP was taken on the seaward extent of an alluvial fan which marks the 0 meter curve. The area was searched in a 100 meter radius, visually and with the echo

sounder for 20 minutes. The average depth was 1.5 meters and clear to the bottom in all directions. The T-sheet rocks were not seen. A photograph of the area is included. *

The T-sheet rock in the vicinity 60°49'32"N, 147°43'07"W, PN 3748, was not found. The area was searched in a 50 meter radius, visually and with the echo sounder for 10 minutes. The average depth was 20 meters with a uniform bottom. . The water visibility was 3-4 meters. *

The T-sheet rock in the vicinity 60°49'16"N, 147°42'48"W, PN 3749, was not found. The area was searched in a 50 meter radius, visually and with the echo sounder for 10 minutes. The average depth was 32 meters with a uniform bottom. The water visibility was 3-4 meters. *

The T-sheet rock in the vicinity 60°49'17"N, 147°42'49"W, PN 3750, was not found. The area was searched in a 50 meter radius, visually and with the echo sounder for 10 minutes. The average depth was 32 meters with a uniform bottom. The water visibility was 3-4 meters. *

The T-sheet rock in the vicinity 60°49'06"N, 147°45'16"W, PN 2019, was not found. The area was searched visually and with the echo sounder using 25 meter line spacing (150 meter radius). The time spent was 20 minutes. The average depth was 30 meters with a uniform bottom. The water visibility was 4 meters. *

The T-sheet rock in the vicinity 60°49'27"N, 147°44'36"W, PN 5823, was not found. The area was searched visually and with the echo sounder for 10 minutes. The average depth was 12 meters with a uniform bottom. The water visibility was 4 meters. *

Changes

T-sheet photographs were apparently taken at a high stage of tide and many minor near shore changes were made. Most of the near shore changes involve changing a T-sheet rock to a ledge. Changes to the T-sheet are noted on the final field plot.

Two T-sheet rocks in the vicinity 60°51'52"N, 147°41'02"W, PN 5801-5802, are a reef. * CONCUR

Two T-sheet rocks in the vicinity 60°50'12"N, 147°40'04"W, PN 8463, are a reef. * CONCUR

K. CROSSLINES

Crosslines are in good agreement with mainscheme hydrography. Crosslines totaled 10.9 nautical miles, representing ~~5.7%~~ 2.6% of the total mainscheme hydrography.

L. JUNCTIONS SEE Evaluation Report, section 5

This survey junctions with survey H-10515 (1:10,000,1993) to the north, RA-20-5-93 (H-10517) (1:20,000, 1993) to the south, and H-10502 (1: 10,000, 1993) to the east. No irregularities were found when comparing soundings and depth curves. Final comparisons will be made at the Pacific Hydrographic Section (PHS).

M. COMPARISON WITH PRIOR SURVEYS SEE Evaluation, section L

There were no prior surveys for sheet J.

* CHART AREA AS shown on Smooth Sheet

N. ITEM INVESTIGATIONS

One AWOIS item was investigated.

AWOIS ITEM 52002

1. Area of Investigation

State:	Alaska
Locality:	Southern Portion of Eaglek Bay
Reported Latitude:	60°52'15"N
Reported Longitude:	147°42'06"W
Datum:	NAD 83
Depth:	0.0
Feature:	Rock Awash

2. Description of Source Item

CL561/93--OPR-P125-RA;" NOAA Ship RAINIER was informed of a dangerous rock awash by MR. Pete Heddell, owner of Honey Charters of Whitter, Alaska." Position ~~was~~ approximate.

3. Survey Requirements

Verify or disprove, determine least depth and position.

4. Method of Investigation

The area was split to 50 meter line spacing using an echo sounder. A shoal was located and split to 10 meter line spacing within a 200 meter radius of the shoal. The area was also investigated visually at low water and a detached position was taken on the shoalest part of the feature.

5. Results of Investigation

The rock was located on October 14 at 00:47:26 (UTC), HDAPS PN 5805, 60°52'04"N, 147°41'55"W. The least depth is 0.2/3 meters submerged. This rock was found 378.7 Meters SW of Reported.

Raw		0.8 meters submerged
Correctors Applied:	Tide	-0.5 meters
Corrected Least Depth		0.3 meters submerged at MLLW

Delete Charted Rock. Chart Rock as found on this survey.

O. COMPARISON WITH THE CHART

SEE Evaluation Report, section 7

This survey was compared to NOS chart 16700, 24th Edition, January 11, 1992, 1:200,000 (NAD 83) and NOS chart 16705,15th Edition, September 1, 1990, 1 : 80,000 (NAD 83).

The charted soundings were found to be in general agreement with the survey. Several charted rocks, with the exception of AWOIS Item 52002, were not found in the indicated position. The charted rocks correspond to the T-sheet rocks in the vicinity. Final comparisons will be made at PHS.

Dangers to Navigation

There were five dangers to navigation noted for this survey.

P. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede ~~previous chart~~letters in their common areas.

Q. AIDS TO NAVIGATION

None.

R. STATISTICS

Vessel:	2120	2123	2124	2125	2126	Total
# of Pos	14	1695	732	584	744	3769
NM Hydro		181.90	28.80	68.80	140.37	419.87

NM^2 Hydrography	10.50
Velocity Cast	1
Detached Positions	92
Tide Stations	2
Reference Numbers	169
Bottom Samples	17

S. MISCELLANEOUS

Bottom samples were sent to the Smithsonian Institution in accordance with the Project Instructions.

The Coast Pilot current and predicted current comparisons were made in accordance with the Project Instructions. The current predictions were adequate and the descriptions accurate.

T. RECOMMENDATIONS

None.

U. REFERRAL TO REPORTS

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

Title	Date Sent	Office
Fall 1993 Horizontal Control Report for OPR-P125-RA	1993	N/CG2333
Fall 1993 Coast Pilot Report for OPR-P125-RA	1993	N/CG245
Project related data for OPR-P125-RA	Incremental	N/CG245

Respectfully Submitted,

Dede L. Pitts
Ensign, NOAA

Approved and Forwarded,

Russell C. Arnold
Captain, NOAA
Commanding Officer

CONTROL STATIONS as of 6 Nov 1993

No	Type	Latitude	Longitude	H Cart	Freq	Vel Code	MM/DD/YY	Station Name
100	F	060:50:49.581	147:27:05.696	15 250	0.0	0.0	09/04/93	QUOTE 1947(DGPS)
101	F	060:52:35.967	147:33:15.597	6 250	0.0	0.0	09/04/93	INDIA 1947(DGPS)
102	F	060:48:21.781	147:41:49.698	7 250	0.0	0.0	09/28/93	AXEL 1947(DGPS)

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

ADVANCE INFORMATION

NOAA Ship RAINIER S221

October 28, 1993

Commander
Seventeenth Coast Guard District
Post Office Box 25517
Juneau, AK 99802-5517

Dear Sir:

Attached is a confirmation copy of the radio messages 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 enclosed.

Sincerely

Russell C. Arnold
Captain, NOAA
Commanding Officer

Enclosures

cc: DMAHTC
N/CG221
PMC

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

ADVANCE INFORMATION

NOAA Ship RAINIER S221

October 29, 1993

Director
DMAHTC
Attn: MCNM
6500 Brookes Lane
Washington, DC 20315-0300

Dear Sir:

While conducting hydrographic survey operations in Prince William Sound, Alaska, NOAA Ship RAINIER discovered five 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

Russell C. Arnold
Captain, NOAA
Commanding Officer

Enclosures

ADVANCE INFORMATION

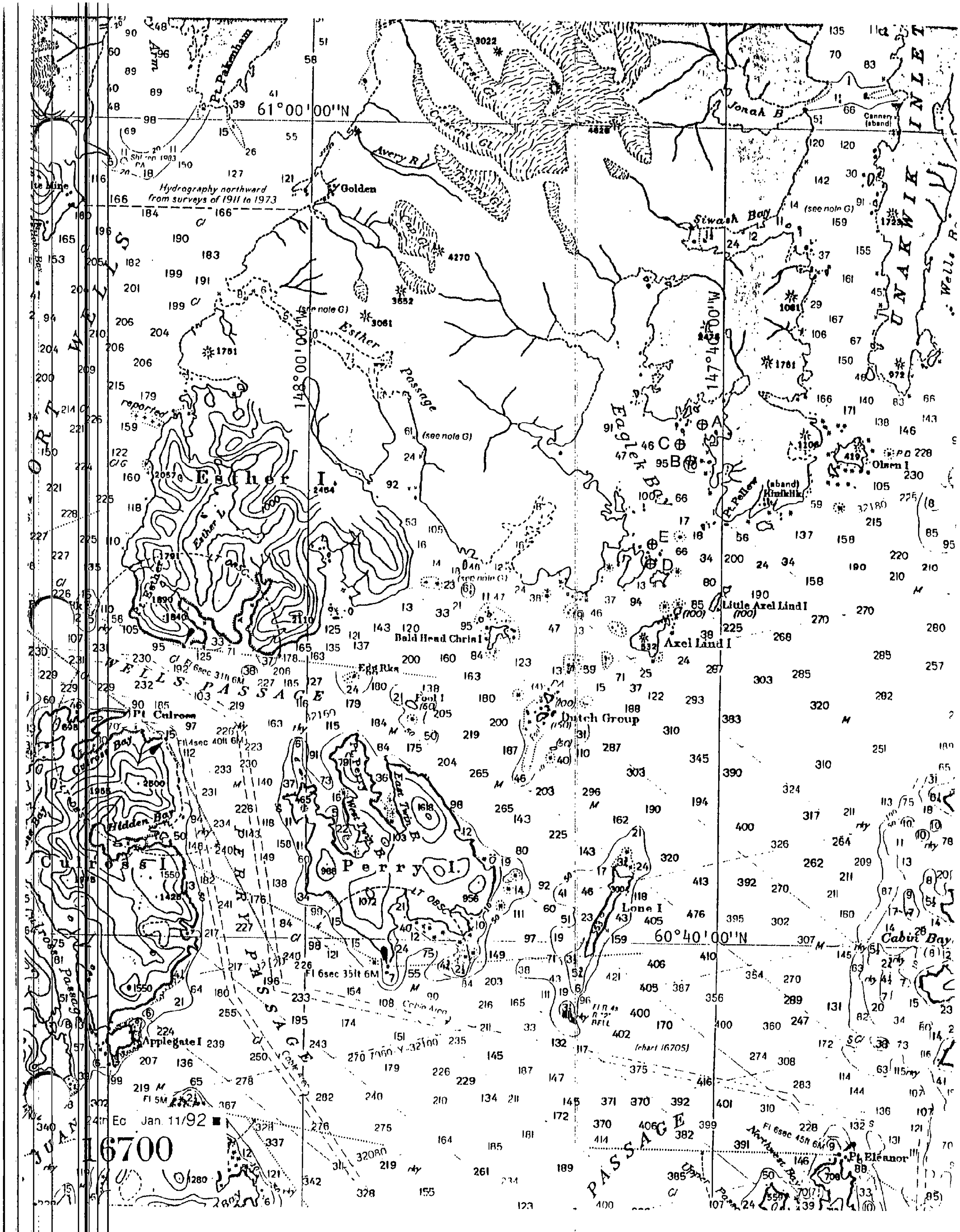
P OCT 93
FM NOAAS RAINIER
TO CCGDSEVENTEEN JUNEAU AK
DMAHTCNAVWARN WASHINGTON DC//MCNM//
INFO NOAAMOP SEATTLE WA
ACCT CM-VCAA
BT
UNCLASS
NOAA SHIP RAINIER HAS LOCATED FIVE DANGERS TO NAVIGATION IN EAGLEK BAY, PRINCE WILLIAM SOUND, ALASKA. (PROJECT OPR-P125-RA) WITHIN THE LIMITS OF HYDROGRAPHIC SURVEY H-10514. THE FOLLOWING INFORMATION IS PROVIDED FOR PUBLICATION IN THE LOCAL NOTICE TO MARINERS:

CHARTS AFFECTED: 16705 15TH ED SEP 01/90 1:80,000 NAD83.
16700 24TH ED FEB 11/92 1:200,000 NAD83.

HEIGHTS ARE REFERENCED TO MLLW BASED ON PREDICTED TIDES.

ITEM	DANGER	DEPTH	LATITUDE	LONGITUDE
A.	SHOAL	10 FMS	60/52/36.4N	147/40/48.8W
B.	SHOAL	2 1/2 FMS	60/51/46.8N	147/41/27.0W
C.	ROCK COVERED	1/4 FMS	60/52/04.6N	147/41/55.4W
D.	SHOAL	7 1/2 FMS	60/49/06.3N	147/43/34.4W
E.	SHOAL	1 FM	60/49/37.1N	147/43/27.8W

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


61°00'00"N
Pt Pakenham
Avery R
Golden
Hydrography northward
from surveys of 1911 to 1973
Jonah B
Cannery (aband)
Siwash Bay
UNAKWIK INLET
Esther Passage
148°00'00"W
147°40'00"W
Eaglek Bay
PORT WELLS
Esther I
Esther L
Olsen I
Pt Pellew
Kiniklik (aband)
Little Axel Lind I
Axel Lind I
Bald Head Chris I
Egg Rks
Fool I
Dutch Group
WELLS PASSAGE
Pt Culross
Culross Bay
Hidden Bay
Culross I
Perry I
Lone I
60°40'00"N
Cabin Bay
Applegate I
PERRY PASSAGE
PASSAGE
Northwest Bay
Pt Eleanor
24th Ed Jan. 11/92
16700

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

ADVANCE INFORMATION

December 10, 1993

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

Dear Sir:

During the office processing of hydrographic surveys H-10514 and H-10515 in Prince William Sound, Alaska three additional dangers to navigation have been discovered. These dangers affect the following charts:

Chart	Edition/Date	Datum
16700	24th Ed., 1/11/92	NAD83
16705	15th Ed., 9/1/90	NAD83

It is recommended that these additional 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

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

Enclosure

cc: DMA/TC
PMC
RAINIER
N/CG221

Hydrographic Survey Registry Number: H-10514

ADVANCE INFORMATION

Survey Title: State: Alaska
Locality: Prince William Sound
Sublocality: Southern Portion of Eaglek Bay

Project Number: OPR-O125-RA

Survey date: October 1993

Features are reduced to Mean Lower Low Water using predicted tides.

Affected Nautical Chart:

Chart	Edition/date	Datum
16700	24th Ed., 1/11/92	NAD83
16705	15th ED., 9/1/90	NAD83

Danger to Navigation	Latitude (N)	Longitude (W)
Shoal, 6 1/2 Fathoms	60/49/12.8	147/43/18.1

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

APPROVAL SHEET

for

H-10514

RA-10-24-93

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: March 8, 1994

MARINE CENTER: Pacific

HYDROGRAPHIC PROJECT: OPR-P125-RA

HYDROGRAPHIC SHEET: H-10514

LOCALITY: Southern Portion of Eaglek Bay, Prince William Sound, Alaska

TIME PERIOD: October 5 - 25, 1993

TIDE STATION USED: 945-4596 Olsen Island, Unakwik Inlet, Ak.
Lat. 60° 52.6'N Lon. 147° 33.1'W

PLANE OF REFERENCE (MEAN LOWER LOW WATER): -4.33 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 11.0 ft.

REMARKS: RECOMMENDED ZONING

Times and heights are direct on Olsen Island, Ak. (945-4596).

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

2. Data for Olsen Island, Ak. (945-4596) is temporarily stored in file #556-4596.

William M. Gibson

CHIEF, DATUMS SECTION

NOAA FORM 76-155
(11-72)

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

SURVEY NUMBER

H-10514

GEOGRAPHIC NAMES

Name on Survey	A ON CHART NO.	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
ALASKA (title)	X		X							1
DERICKSON BAY	X		X							2
EAGLEK BAY	X		X							3
EAGLEK ISLAND	X		X							4
PELLEW, POINT	X		X							5
PRINCE WILLIAM SOUND	X		X							6
SCHOPPE BAY			X							7
										8
										9
										10
										11
										12
										13
										14
										15
				Approved:						16
				Charles R. Harrington						17
				Chief Geographer - N/CG2x5						18
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				JUN 21 1994						20
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NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 77-27(H) (9-83) | U.S. DEPARTMENT OF COMMERCE | REGISTRY NUMBER

HYDROGRAPHIC SURVEY STATISTICS

H-10514

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION Bottom Samples	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS ^	1
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						
CAHIERS						
BOXES						

SHORELINE DATA

SHORELINE MAPS (List): DM-10059, DM-10064

PHOTOBATHYMETRIC MAPS (List): NA

NOTES TO THE HYDROGRAPHER (List): NA

SPECIAL REPORTS (List): None

NAUTICAL CHARTS (List): 16700 24th Ed., 1/11/92, 16705 15th Ed. 9/1/90

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS VERIFICATION	AMOUNTS EVALUATION	AMOUNTS TOTALS
POSITIONS ON SHEET			3765
POSITIONS REVISED			
SOUNDINGS REVISED			
CONTROL STATIONS REVISED			
	TIME-HOURS VERIFICATION	TIME-HOURS EVALUATION	TIME-HOURS TOTALS
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	38		38
VERIFICATION OF SOUNDINGS	38.5		38.5
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	67.5		67.5
COMPARISON WITH PRIOR SURVEYS AND CHARTS		6	6
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		13	13.0
GEOGRAPHIC NAMES			
OTHER* Digitization			
*USE OTHER SIDE OF FORM FOR REMARKS — TOTALS	144.0	19.0	163

Pre-processing Examination by LT D. Haines	*Beginning Date* 11/9/93	*Ending Date* 12/10/93
Verification of Field Data by D. Doles, R. Mayor, L. Deodato, S. Ostvedt	*Time (Hours)* 144.0	*Ending Date* 9/7/94
Verification Check by L. Deodato, G. Kay	*Time (Hours)* 8.5	*Ending Date* 1/17/95
Evaluation and Analysis by G. Kay	*Time (Hours)* 19.0	*Ending Date* 1/20/95
Inspection by R. DAVIES	*Time (Hours)* 9	*Ending Date* 2/7/95

EVALUATION REPORT
SURVEY H-10514

1. INTRODUCTION

Survey H-10514 is a basic hydrographic survey accomplished by the NOAA Ship *Rainier,* under the following Project Instructions.

OPR-P125 RA, dated July 19, 1993
CHANGE NO. 1, dated August 25, 1993
CHANGE NO. 2, dated September 2, 1993

This survey was conducted in Alaska, and covers an area in the northwestern portion of Prince William Sound, including Eaglek Bay, Derickson Bay and a portion of Schoppe Bay. The surveyed area is bounded by latitude 60/52/45N to the north and latitude 60/49/00N to the south. The eastern limit is longitude 147/38/45W just east of Point Pellew. The western limit is longitude 147/49/30W inside of Schoppe Bay. The shoreline consists of a rocky shoreline along small islands. The bottom consists of mud. Depths range from less than a meter along the shoreline to a depth of 384 meters. This depth is located in the lower southeast portion of this survey.

Depth curves depicted on the smooth sheet were selected from those authorized through HSG 69. However, instead of drafting all authorized curves only those curves considered necessary for the reasonable portrayal of the bottom were drafted. The selected curves were the 0, 5 and 20 meter. A note was added to the smooth sheet to identify these values. A few supplemental depth curves have been added to the smooth sheet in brown as warranted. The bottom characteristics are annotated on a separate overlay.

Predicted tides for Cordova, Alaska, were used for the reduction of soundings during field processing. Approved hourly heights are zoned from Olsen Island, Unakwik Inlet, Alaska, gage 945-4596, 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. Offset values and sound velocity correctors are adequate. 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 Guideline 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 a complete depiction of the survey data.

2. CONTROL AND SHORELINE

Sections H and I of the hydrographer's report and the Fall 1993 Horizontal Control Report for OPR-P125-RA, contain adequate discussions of horizontal control and hydrographic positioning.

Differential GPS (DGPS) was used to control this survey. A horizontal dilution of precision (HDOP) not to exceed 3.75 was computed for survey operations. The quality of 295 positions exceeds limits in terms of horizontal dilution of precision (HDOP). These positions are isolated and occur randomly thoughout the survey area. A review of the data, however, indicates that none of these fixes are used to position dangers to navigation. The soundings located by these fixes are consistent with the surrounding information. These fixes are considered acceptable.

Positions of horizontal control stations used during this survey are field values based on NAD 83.

The smooth sheet is annotated with an NAD 27 adjustment tick based on values determined with the 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:	-1.896 seconds	(-58.679 meters)
Longitude:	7.466 seconds	(112.742 meters)

The year of establishment of control stations shown on the smooth sheet originates with the previously referenced horizontal control report and the hydrographer's signal list.

The following digital shoreline maps were compiled on NAD 83, enlarged to the scale of 1:10,000 and apply to this survey.

Map Number	Photography date	Scale
DM-10059	June-July 1989	1:20,000
DM-10064	June-July 1989	1:20,000

The following features were revised with supporting positional information. These revisions are considered adequate to supersede the common photogrammetrically delineated shoreline.

Feature	Latitude North	Longitude West
islet	60/52/36	147/40/25
islet	60/50/35	147/44/18
islet	60/50/18	147/44/49

The following feature was transferred from the field sheet with supporting positional information. This revision is considered adequate to supersede the common photogrammetrically delineated shoreline.

Feature	Latitude North	Longitude West
sand bar	60/49/38	147/43/58

3. HYDROGRAPHY

Except for the following, 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.

Authorized depth curves were adequately drawn and developed except the zero curve. The inshore limit as defined by the Project Instructions (section 1.8), is the 3-meter depth curve in steeply sloping areas.

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 1993 Edition.

5. JUNCTIONS

Survey H-10514 junctions with the following surveys.

Survey	Year	Scale	Area
H-10502	1993	1:10,000	East
H-10515	1993	1:10,000	North
H-10517	1993	1:20,000	South

The junctions with the above surveys have been made formally accomplished. Soundings are in good agreement.

6. COMPARISON WITH PRIOR SURVEYS

There are no prior surveys within the limits of survey H-10514.

7. COMPARISON WITH CHART

Survey H-10514 was compared with the following charts.

Chart	Edition	Date	Scale	Datum
16705	15th	September 1, 1990	1:80,000	NAD 83
16700	24th	January 11, 1992	1:200,000	NAD 83

a. Hydrography

The charted hydrography on the above charts originate with miscellaneous sources. Survey H-10514 is adequate to supersede charted hydrography within the survey area.

A study of prior survey data, in accordance with Hydrographic Survey Guideline No. 39, the effect of the 1964 Prince William Sound earthquake was not performed, because of the lack of prior survey data.

b. AWOIS

AWOIS item number 52002 is the only AWOIS feature within the limits of this survey. This feature was adequately developed by the hydrographer, see Descriptive report section N.

c. Controlling Depths

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

d. Aids to Navigation

There are no aids to navigation located within the limits of this survey. There are no charted landmarks there are located within the limits of this survey.

e. Geographic Names

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

f. Dangers to Navigation

The hydrographer reported five dangers to navigation to the Seventeenth Coast Guard District, DMA/HTC and N/CG221, during this survey. One additional danger to navigating was discovered during office processing. This danger is a 12.3-meter sounding, at position number 3723/1, latitude 60/49/12.8N, longitude 147/43/18.9W. A copy of this danger to navigation has been forwarded to the Seventeenth Coast Guard District, DMA/HTC and N/CG221. Copies of these reports are attached.

8. COMPLIANCE WITH INSTRUCTIONS

Survey H-10514 adequately complies with the Project Instructions, except where noted in this report.

9. ADDITIONAL FIELD WORK

This is a good hydrographic survey. Additional field work is not required.

Gordon E. Kay
Cartographer

APPROVAL SHEET
H-10514

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 processings 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.

Russ Davies for Date: 2-7-95
Dennis J. Hill
Chief, Hydrographic Processing Unit
Pacific Hydrographic Section

I have reviewed the smooth sounding plot, 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 A. Timmons Date: 2-12-95
Kathy A. Timmons
Commander, NOAA
Chief Pacific Hydrographic Section

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Final Approval

Approved:

Thomas W. Richards Date: 3-1-95
Thomas W. Richards
Captain, NOAA
Chief Nautical Chart 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-10514

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	8/15/95	ALMACEN	Full ~~Part Before~~ After Marine Center Approval ~~Signed~~ Via Full application of
			Drawing No. Sndgs & features from SS.
16700	9/13/95	ALMACEN	Full ~~Part Before~~ After Marine Center Approval ~~Signed~~ Via Full application of
			Drawing No. Sndgs & features from SS thru 16705
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
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SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.