

10163

Diagram No. 8102-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey ... Hydrographic
Field No. RA-10-5-84
Office No..... H-10163

LOCALITY

State Alaska
General Locality Behm Canal
Locality Claude Point to Point Whaley

19 84

CHIEF OF PARTY
CDR. J.P. Vandermeulen

LIBRARY & ARCHIVES

DATE March 28, 1986

☆U.S. GOV. PRINTING OFFICE: 1980-766-230

10163

Area 5

CHTS

.17424 }
.17422 } to sign off sec.
.17420 } Record of Application

HYDROGRAPHIC TITLE SHEET

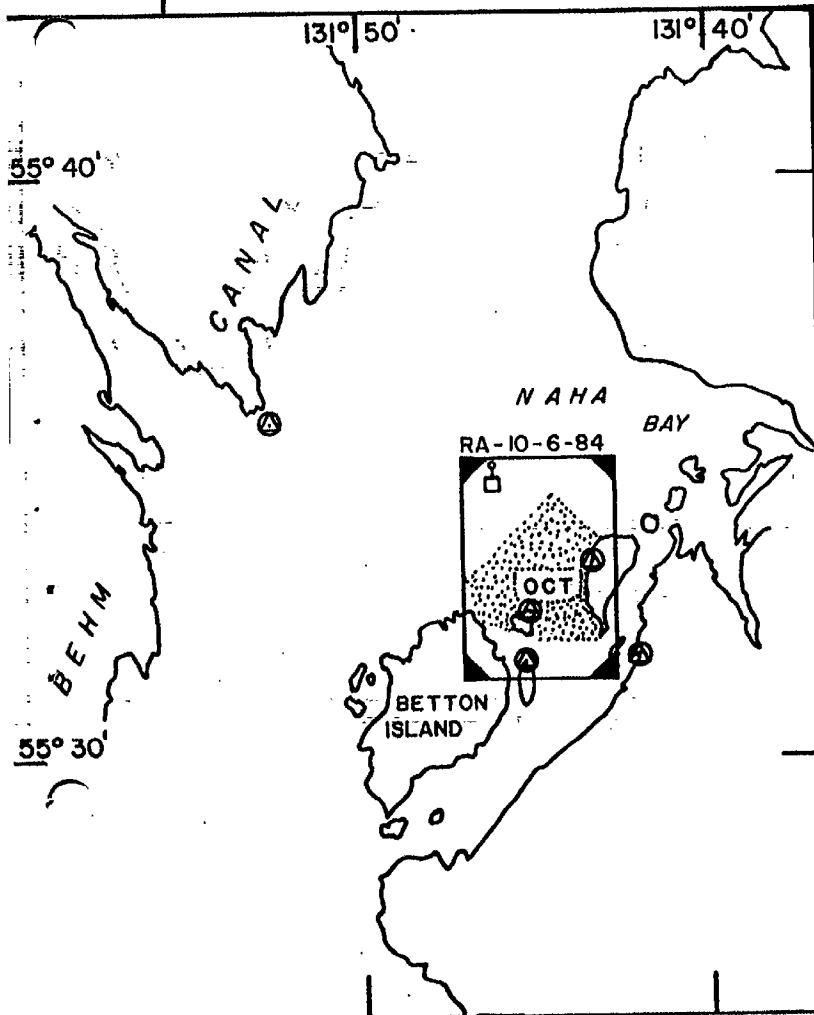
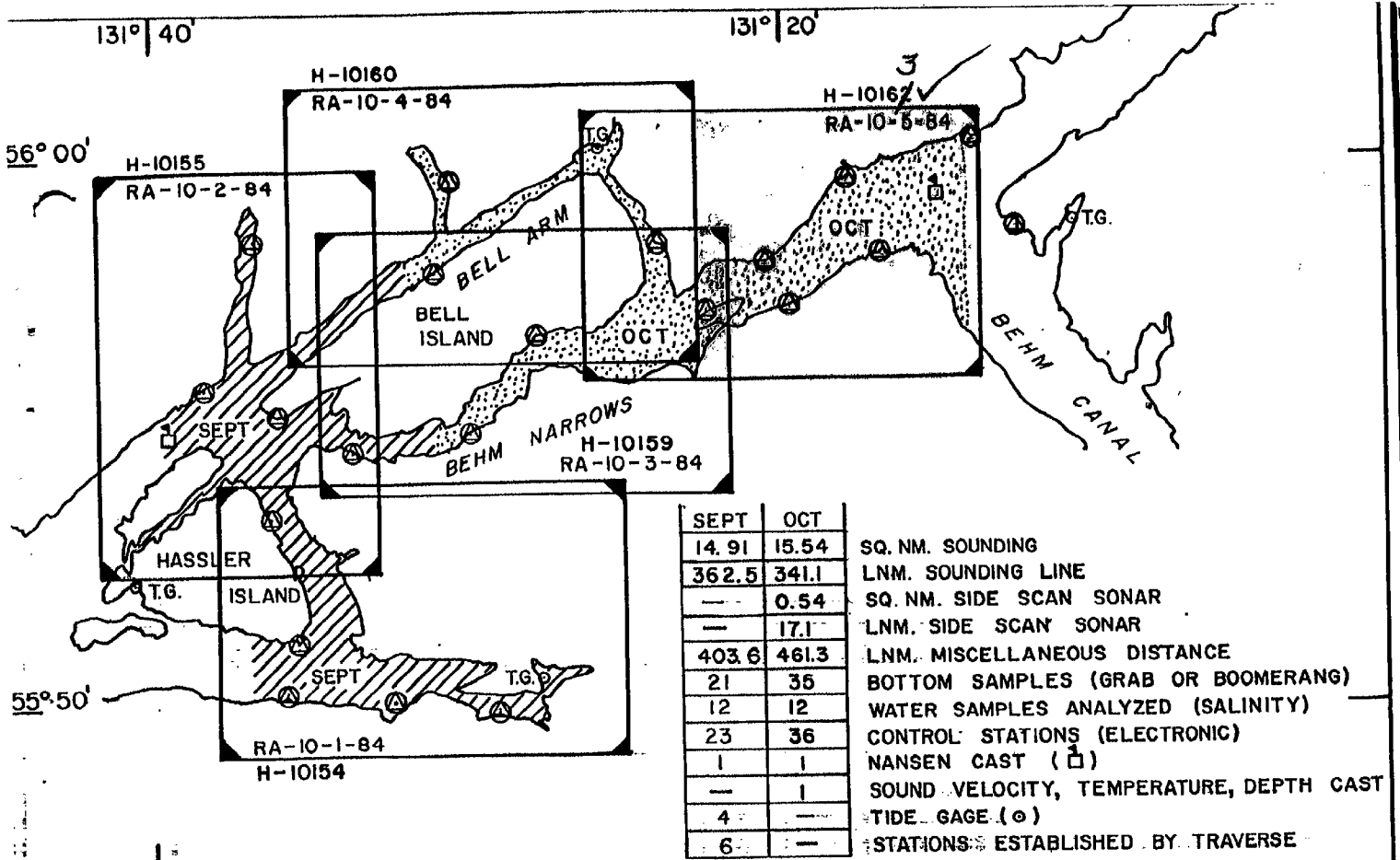
H-10163

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 10-5-84

State AlaskaGeneral locality Behm CanalLocality Claude Point to Point WhaleyScale 1:10,000 Date of survey October 10-16, 1984Instructions dated August 9, 1984, Change No 1 Project No. OPR-0168-RA-84
dated August 17, 1984Vessel NOAA Ship RAINIER, 2120, 2123, 2125, 2124Chief of party CDR. J.P. VandemeulenSurveyed by ENS. T. Porta, ENS. D. LaReau, LTJG S. KonradSoundings taken by echo sounder, ~~hand lead, etc.~~Graphic record scaled by Survey PersonnelGraphic record checked by Survey PersonnelEvaluation by G.E. Kay Automated plot by PMC Xynetics Plotter
~~Produced by~~Verification by J. N. Shofner
~~Verified by~~Soundings in fathoms ~~feet~~ at MLLW ~~MLLW~~ and tenths of FathomsREMARKS: Marginal notes in black were made during the evaluation phase of
H-10163 at the Pacific Marine Center, Seattle, Washington. Separates are filed
in the back of the raw data accordian file folder.STANDARDS CK'D 3-28-86C. LayANNOTS/SURF ✓ AAA 3/31/86SA 4-2-97



PROGRESS SKETCH

OPR-0168-RA-84

HYDROGRAPHIC SURVEY
BEHM NARROWS, ALASKA

SEPT. 4 - OCT. 30, 1984.

NOAA SHIP RAINIER
JOHN P. VANDERMEULEN, CDR., NOAA
COMD'G

FROM CHART 17420

A. PROJECT

This basic hydrographic survey H-10163 was accomplished in accordance with Project Instructions OPR-0168-RA-84; Behm Narrows, Alaska, dated August 9, 1984, Change No.1, dated August 17,1984. ✓

B. AREA SURVEYED

This survey, conducted from October 10 to October 16,1984, includes the area from Claude Point to Whaley Point, Alaska, bounded by latitudes 55/56/35 N and 56/00/25 N and longitudes 131/23/00 W and 131/14/00 W. ✓

C. SOUNDING VESSEL

Sounding data for this survey were obtained by vessels RA-3 (2123) and RA-4 (2124). Bottom samples were obtained by RA-5 (2125) and RAINIER (2120). No unusual sounding vessel configurations or problems occurred during hydrographic data collection. ✓

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDING

Survey launches were equipped with Raytheon DSF-6000N dual beam echo sounders and depths on this survey ranged from 0 fathoms to 234 fathoms. ✓

<u>VESSEL</u>		<u>SOUNDING EQUIPMENT</u>	<u>SERIAL NO</u>
RA-3	(2123)	Raytheon DSF-6000N	A119N
RA-4	(2124)	Raytheon DSF-6000N	A117N
RA-5	(2125)	Raytheon DSF-6000N	A123N

 ✓

The DSF-6000N echo sounders were operated primarily in the dual beam high frequency digitized mode. In order to ensure that high and low frequency beams were tracking the steep contours of the bottom close to shore the launches were operated at low speeds. The high and low frequency gain controls and the phase controls were operated manually because the high frequency beam could not track the bottom when these controls were in the automatic mode. Nevertheless, approximately 5 percent of the time the high frequency trace could not track the bottom. When this occurred the depth values were scanned from the low frequency beam trace. There were no discrepancies at the junctions of the high and low frequency beams data as the two traces were in close agreement at the points of changeover. In depths of over 100 fms the 6DB+ boost was used when needed. ✓

The echo sounders in launches 2123 and 2124 (S/N A119N and A117N respectively) had trouble tracking the very steep bottom in the region bounded by Latitudes 55/57/45N to 55/58/15N and Longitudes 131/13/00W to 131/14/00W. Hydrography was run in this area on three different days, 14-16 October (JD 288-290) at different launch speeds in order to obtain an acceptable trace. Data which did not have an acceptable trace were rejected. ✓

All soundings were taken from the launches under Mini-Ranger Range-Range or Range-Azimuth control. Since the echo sounding transducers on launches are directly below the the Mini-Ranger R/T units the ANDIST associated with these survey data is 0.0 meters. The final field sheets were plotted with this ANDIST value. ✓

Bar checks were conducted at least once daily for both beams of the DSF-6000N echo sounder as per the Provisional Operating and Processing Instructions for the DSF-6000N Echo Sounder. All bar checks were performed within the survey area. The bar checks were used to confirm proper system function, and bar check data were combined with velocity data to determine launch TRA correctors. The TRA for the wide and narrow beams were within 0.1 fathom of each other. These TRA calculations resulted in a 0.3 fathom TRA for launch 2123, and a 0.2 fathom for launch 2124. The smooth field sheet was plotted with a TRA of 0.3 fathoms for all launches.

Soundings were reduced with the following draft values:

Vessel 2123 = 0.3 fathoms

Vessel 2124 = 0.2 fathoms

Velocity corrections were derived from two Nansen casts taken during the survey as listed below. A final table of velocity corrections was created averaging both Nansen casts. However, the smooth field sheet was plotted with a preliminary velocity correction table based only on the first Nansen cast. Printouts of velocity tables are included in the separates following the text. ✓

Separates are located at the back of the accession file folder.

VELOCITY CASTS

<u>CAST NUMBER</u>	<u>DATE</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>
1 (Nansen)	18 SEPT (262)	55-55-00N	131-39-36W
2 (Nansen)	10 OCTOBER (284)	55-59-12N	131-15-42W

 ✓

TC/TI tapes were made in accordance with PMC OORDER, Appendix Q. Printouts of the TC/TI tapes are included in the separates following the text. For further information and details relating to correction to echo soundings see Corrections to Echo Soundings Report OPR-0168-RA-84. ✓

E. HYDROGRAPHIC SHEET

Two field sheets designated RA-10-5E-84 and RA-10-5W-84 were prepared on the RAINIER using the PDP/8/E Hydroplot system which produces modified transverse Mercator projections. Smooth field sheets were plotted by AST Yvette Barnes and AST Rick Cole. A list of parameters used to define these field sheets is provided in the separates following the text. ✓

All data and accompanying field records will be sent to Pacific Marine Center for verification. ✓

F. CONTROL STATIONS

Control stations for this survey consisted of existing Third order stations.

STATIONS RECOVERED

BURROUGHS BAY NORTH BASE 1891
BURROUGHS BAY SOUTH BASE 1891
CAT 2 1929
CLA 1930
DYE 1891
ELISE 1930
FAG 2 1929
GAD 2 1929
HAG 2 1929
MAN 1891
PIT 1891
TUG 1891
WOO 1891

G. HYDROGRAPHIC POSITION CONTROL

Range/Range and Range/Azimuth were the methods used for hydrographic positioning. Motorola Mini-Ranger III and Wild Theodolites were the instruments used. The following tables summarize the serial numbers and locations of all mobile and shore positioning equipment.

WILD THEODOLITE S/N

T-1: 14055, 65516
T-2: 57259, 73226, 68648, 75599

MINI-RANGER MOBILE EQUIPMENT

<u>VESSEL</u>	<u>CONSOLE</u>	<u>R/T S/N</u>	<u>DATES</u>
2123	711	B1405	285-289
2124	B0269	B1388	286-290
2125	715	911615	285

MINI-RANGER SHORE EQUIPMENT

<u>CODE</u>	<u>TRANSPONDER S/N</u>	<u>CODE</u>	<u>TRANSPONDER S/N</u>
A	1645	0	C1789
D	1569	1	C1883
E	911721	2	B1106
F	911711	3	1628

JULIAN DAYS

		<u>285</u>	<u>286</u>	<u>287</u>	<u>288</u>	<u>289</u>	<u>290</u>
S							
T	134	2					
A	137		2				
T	152				F		
I	153		F	F		F	
O	154	E					
N	155			0,A	A	A	
	156			1	1	1	1
N	157		0,3				
U	158	A					
M	159	1	1				
B	160	3	3	3		3	
E	162		0	D	D	D	D
R							

CALIBRATIONS AND PERFORMANCE

Mini-Ranger calibrations and system checks were performed in accordance with PMC OORDER, Appendices M and S. Initial baseline calibrations for this project were conducted on the Homer Spit, Homer, Alaska on 25 August 1984. Ending baseline calibrations were conducted at Lake Union, Seattle, Washington from November 7 to November 9, 1984. No significant variation was found between initial and ending calibration corrections. ✓

Only initial correctors were used to plot the smooth field sheet. The initial calibrations also determined the minimum signal strength cut-off values for each system. For more information regarding systems checks and calibrations, refer to the Electronic Control Report, OPR-0168-RA-84. ✓

Daily static calibrations for each code used were performed at Third-order Class I stations along the water's edge in the project area. This satisfied the requirement for weekly critical and daily non-critical systems checks. ✓

Bottom samples obtained by the RAINIER on JD 284 were positioned via radar fixes. ✓

Mini-Ranger performance was generally very good. All transponders were set up on Third-order, Class I (or better) geodetic stations. ✓

H. SHORELINE

Shoreline was applied to the field sheets from enlargements of 1:20,000 scale registered shoreline map TP-01160. *Field edit was not conducted. Rocks, ledges and new features located by the hydrographer are shown in red on the smooth sheet. Reference numbers for shoreline verification were used by the hydrographer.

** Note, shoreline verification was performed. The results of the investigation has been combined with the hydrographic findings.*

I. CROSSLINES

A total of 9.2 nautical miles of crosslines were run during this survey, representing 8.5% of the mainscheme mileage. Agreement of soundings at crossing was good, generally within 1 fathom. ✓

J. JUNCTIONS

This survey junctions to the west with RA-10-3-84, H-10159 and to the east with a prior survey H-5174, a 1:20,000 scale survey done in 1931. Agreement of soundings at junctions was good, generally within 1 fathom.

See Evaluation Report Section 4.

K. COMPARISON WITH PRIOR SURVEYS

There were no AWOIS items in this survey area. This survey was compared to the following prior surveys:

<u>SURVEY</u>	<u>SCALE</u>	<u>YEAR</u>
H-5103	1:20,000	1930
H-5174	1:20,000	1931

All sounding comparisons were good, within 1 or 2 fathoms, except as stated below:

H-5103

<u>POSITION</u>	<u>PRIOR SURVEY</u>	<u>PRESENT SURVEY</u>
-----------------	---------------------	-----------------------

- (1) The ridge feature north of Claude Point has changed. Depths of 48 fathoms were found during the prior survey at latitude 55/57/42 N and longitude 131/22/06 W. During the present survey, depths of 50 ~~between 51 and 54~~ fathoms were obtained.

This area was extensively developed. Present survey has determined 150-fathoms on this ledge.

H-5174

Prior Survey

	<u>POSITION</u>	<u>PRIOR SURVEY</u>	<u>PRESENT SURVEY</u>
(1)	55/58/19N 131/20/01W	50	26
(2)	55/58/40N 131/19/15W	56	38
(3)	55/58/31N 131/19/35W	53	38 <i>See Evaluation Report section 6</i>
(4)	55/58/07N 131/20/18W	52	23
(5)	55/58/34N 131/19/09W	153	118 109
(6)	The 200 fathom curve at latitude 55/58/00 N and longitude 131/19/30 W appears to have moved east 400m. ✓		

L. COMPARISON WITH CHART

The survey was compared to the following chart:

<u>Chart Number</u>	<u>Scale</u>	<u>Edition</u>	<u>Date</u>
17422	1:79,000	6th	Aug. 15, 1981

Present charted soundings originated with the prior surveys discussed in section K. The results of the chart comparison are therefore the same as those of the prior survey comparisons including the exceptions noted. There were no dangers to navigation identified or reported by the ship for this survey.

There appears to be a charting error on 17422. A depth of 233 fathoms at latitude 55/59/15 N and longitude 131/14/10 W was charted instead of the prior survey depth of 223 fathoms. During the present survey a depth of 200 fathoms was found that should supersede the previous depth. *Concur*

The charted rock at latitude 55/57/15 N and longitude 131/22/36 W was searched for at low tide and not found. Hydrography was run in this area and showed no evidence of a rock. This rock is not shown on the prior survey H-5103 and *Concur* should be removed from the chart.

The rock^{*Charted*} at latitude 55/57/26 N and longitude 131/21/59 W was searched for at low tide and not found. Hydrography was run in this area and showed no evidence of a rock. There is no proof of a rock at this location and it should be removed from the chart. A rock appears on the prior survey H-5103 and it is likely that it was a rock that exists less than 10m from shore. *see Evaluation Report section 6*

There appears to^{*06.0*} be an islet symbol on TP-01163 at latitude 55/57/15 N and longitude 131/21/36 W. We searched for this islet at low tide and also ran hydrography in this area, and it showed no evidence of an islet. This islet is not on the prior survey nor is it charted. This islet should not be charted. *Concur* *This islet was determined to be an ink spot on TP-01163 and should not be charted.*

M. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede all prior surveys for charting purposes. ✓

N. AIDS TO NAVIGATION

There are no Aids to Navigation within the limits of this survey. ✓

O. STATISTICS

Sounding Vessel	Linear Nautical Miles of Hydro	Square Nautical Miles of Hydro	Number of Positions
<i>2120</i>			<i>3</i>
2123	65.78		831 <i>820</i>
2124	42.42		568 <i>565</i>
2125	0.0		3
TOTAL	<u>108.20</u>	<u>7.47</u>	<u>1402</u> <i>1391</i>

Bottom Samples: 6
 Velocity Casts: 2
 Tide Stations : 2

P. MISCELLANEOUS

No anomalous currents were observed or reported during this survey. No Loran-C data was collected. Bottom samples were submitted to the Smithsonian Institute. ✓

Q. RECOMMENDATIONS

This survey is complete and no additional field work is recommended. ✓

R. AUTOMATED DATA PROCESSING

Data acquisition and processing were accomplished in accordance with the Hydrographic Manual (Fourth Edition), Manual of Automated Hydrographic Surveys, the PMC OPORDER, Hydrographic Survey Guidelines and the Hydrographic Data Requirements for 1984. ✓

Soundings and positions were collected by a Hydroplot system using Hyperbolic Range/Range Hydroplot program Rk 112 and Range-Azimuth Hydroplot program RK 116. Daily master tapes and corresponding corrector tapes include the TRA for the sounding vessels, electronic control baseline correctors for Mini-Ranger consoles and R/T units, and all depth corrections. Velocity tapes were generated from Nansen cast data. The following is a list of all computer programs version dates used for data acquisition or processing:

<u>Number</u>	<u>Description</u>	<u>Version</u>
RK 112	Hyperbolic, R/R Hydroplot	4/23/84
RK 116	Range-Azimuth Hydroplot	4/28/84
RK 201	Grid, Signal, and Lattice Plot	4/18/75
RK 211	Range/Range Non-Real Time Plot	2/13/84
RK 212	Visual Station Table Load	4/01/74
RK 216	Range/Azimuth Non-Real Time Plot	2/24/84
RK 300	Utility Computations	10/21/80
RK 330	Reformat and Data Check	5/04/76
PM 360	Electronic Corrector Abstract	2/02/76
RK 407	Geodetic Inverse/Direct Computation	9/25/78
AM 500	Predicted Tide Generator	11/10/72
RK 530	Layer Corrections for Velocity	5/10/76
RK 561	H/R Geodetic Calibration	12/01/82
AM 602	Elinore-Line Oriented Editor	12/08/82
AM 606	Tape Duplicator	8/22/74
AM 607	Self-Starting Binary Loader	8/10/80
RK 610	Binary Tape Duplicator	12/01/82
RK 612	Line Printer List	3/22/78
RK 900	Plot Test Tape Generator for AM902	5/07/76
RK 901	Core Check	3/01/72
AM 902	Real Time Checkout	11/10/72
DA 903	Diagnostic-Instruction Time	2/27/76
RK 905	Hydroplot Controller Checkout	3/18/81
RK 935	Hydroplot Hardware Tests	3/15/82

S. REFERENCES TO OTHER REPORTS

The following reports contain information related to this survey.

Echo Sounding Report	OPR-0168-RA-84
Electronic Control Report	OPR-0168-RA-84
Horizontal Control Report	OPR-0168-RA-84
Coast Pilot Report	OPR-0168-RA-84

Respectfully submitted,

S. Dawn LaReau

S. Dawn LaReau
ENS NOAA

FIELD TIDE NOTE
RA-10-5-84
H-101683

Field tide reduction of soundings was based on predicted tides from Ketchikan, Alaska (945-0460). Corrections were obtained from Preliminary Tidal Zoning OPR-0168-RA-84. The predicted tides were derived using program AM500.

Two Bristol Bubbler tide gages were installed at two locations in the project area. Location and period of operation are as follows:

<u>SITE</u>	<u>LOCATION</u>	<u>PERIOD</u>
Convenient Cove	55/52.1 N 131/41.3 W	Sept.4 - Oct.17, 1984
Fitzgibbon Cove	55/59.0 N 131/10.5 W	Sept.5 - Oct.17, 1984

CONVENIENT COVE

Gage (S/N 63A2921) was installed and began operation September 4, 1984. The staff was also installed and leveled September 4. Excellent records were obtained with no interruptions. The marigram reads 6.0 ft greater than the staff.

FITZGIBBON COVE

Gage (S/N 736620) was installed and began operation Sept. 5, 1984. The staff was also installed and leveled Sept. 5. Good records were obtained with the exception of a loss of 5 days from 1330 October 6 to 1800 October 11 when the marigram paper jammed. The ship was unable to check the gage during this period because of an extended in-port due to weather. No hydro was run during this period. The marigram reads 6.9 ft less than the staff.

LEVELS

The reference station at Ketchikan was leveled September 10, 1984. Final levels were run October 19, 1984. Initial and final levels compared very well.

Final levels on the subordinate stations showed no significant movement of the tidal staffs.

DATE: 1/4/85

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Marine Center: Pacific

OPR: 0168

Hydrographic Sheet: H-10163

Locality: Claude Pt. to Pt. Whaley, Alaska

Time Period: October 10-16, 1984

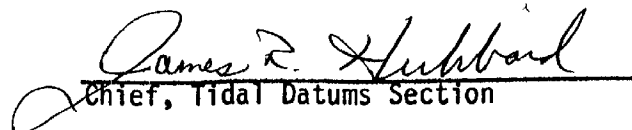
Tide Station Used: 945 0879

Plane of Reference (Mean Lower Low Water): 11.84 ft.

Height of Mean High Water Above Plane of Reference: 15.0ft.

Remarks: Recommended Zoning:

Zone Direct


Chief, Tidal Datums Section

MASTER STATION LIST
 OPR-0168-RA-84
 BEHM NARROWS, ALASKA

FINAL VERSION

132	1	55	57	58605	131	23	39401	139	0001	000000 ✓
/ANCHOR 1930										
									NGS LISTING	
134	1	55	56	16492	131	23	39507	250	0001	000000 ✓
/CLA 1930										
									NGS LISTING	
135	1	55	57	37569	131	23	14007	139	0002	000000 ✓
/CUB 2 1929										
									NGS LISTING	
137	1	55	57	37871	131	24	20246	250	0001	000000 ✓
/ELSIE 1930										
									NGS LISTING	
152	1	55	58	18517	131	16	48591	250	0002	000000 ✓
/CAT 2 1929										
									NGS LISTING	
153	1	55	58	02039	131	18	01809	250	0003	000000 ✓
/FAG 2 1929										
									NGS LISTING	
154	1	55	57	24259	131	21	21654	250	0001	000000 ✓
/GAD 2 1929										
									NGS LISTING	
155	1	55	58	54844	131	18	57202	250	0002	000000 ✓
/HAG 2 1929										
									NGS LISTING	
156	1	55	58	54608	131	12	48725	250	0002	000000 ✓
/MAN 1891										
									NGS LISTING	
157	1	55	57	20998	131	20	04272	250	0002	000000 ✓
/PIT 1891										
									NGS LISTING	
158	1	55	57	13921	131	22	31272	250	0002	000000 ✓
/WOO 1891										
									NGS LISTING	
159	1	55	57	45597	131	22	54315	250	0002	000000 ✓
/DYE 1891										
									NGS LISTING	
160	1	55	58	03481	131	20	35070	250	0002	000000 ✓
/TUG 1891										
									NGS LISTING	
161	1	55	59	36924	131	17	45630	250	0004	000000 ✓
/BURROUGHS BAY SOUTH BASE 1891										
									NGS LISTING	
162	1	56	00	06990	131	14	57601	250	0004	000000 ✓
/BURROUGHS BAY NORTH BASE 1891										
									NGS LISTING	

GEOGRAPHIC NAMES

H-10163

Name on Survey	A ON CHART NO. 17420 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 *										
	ANCHOR PASS	X									X
BEHM CANAL	X									X	2
CLAUDE POINT	X									X	3
POINT LEES	X									X	4
POINT WHALEY	X									X	5
ALASKA (title)											6
ELSIE POINT											7
* <u>DICTIONARY OF ALASKA PLACE NAMES</u> : Geological Survey Professional Paper 567; 8											
1967; Reprinted 1971 with minor revisions.											
											9
BELL ARM											10
COW CREEK											11
REVILLAGIGEDO ISLAND											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25

Approved:

Charles E. Harrington
Chief Geographer- N/C6245

5 FEB. 1985


APPROVAL SHEET
DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY

RA-10-5-84

H-10163

In producing this sheet, standard procedures were observed in accordance with the Hydrographic Manual, PMC OORDER, and the Instruction Manual for Automated Hydrographic Surveys. The data was examined daily during the execution of the survey.

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


John P. Vandermeulen
Commander, NOAA
Commanding Officer

HYDROGRAPHIC SURVEY STATISTICS

H-10163

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

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT
SMOOTH SHEET		1	SMOOTH OVERLAYS: POS., AND EXCESS		
DESCRIPTIVE REPORT		1	FIELD SHEETS AND OTHER OVERLAYS		2
DESCRIP-TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/SOURCE DOCUMENTS
ACCORDION FILES	1		1		
ENVELOPES					
VOLUMES	1				
CAHIERS					
BOXES					

SHORELINE DATA

SHORELINE MAPS (List):

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List): Horizontal Control, Electronic, AND Correction to Echo Sounder

SPECIAL REPORTS (List): OPR-0168-RA-84

NAUTICAL CHARTS (List): Chart Enlargement of Chart 17422 6th Ed. AUG. 15/81

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			1391	
POSITIONS REVISED			4291	
SOUNDINGS REVISED			127	
CONTROL STATIONS REVISED				
	TIME-HOURS			
	VERIFICATION	EVALUATION	TOTALS	
PRE-PROCESSING EXAMINATION				
VERIFICATION OF CONTROL				
VERIFICATION OF POSITIONS	45.5		45.5	
VERIFICATION OF SOUNDINGS	126.0		126.0	
VERIFICATION OF JUNCTIONS				
APPLICATION OF PHOTOBATHYMETRY				
SHORELINE APPLICATION/VERIFICATION				
COMPILATION OF SMOOTH SHEET	49.5		49.5	
COMPARISON WITH PRIOR SURVEYS AND CHARTS		12	12	
EVALUATION OF SIDE SCAN SONAR RECORDS				
EVALUATION OF WIRE DRAGS AND SWEEPS				
EVALUATION REPORT		30	30	
GEOGRAPHIC NAMES				
OTHER: <u>Digitizing</u>			12	
*USE OTHER SIDE OF FORM FOR REMARKS	TOTALS	221	42	275

Pre-processing Examination by <u>M. Kenny, C.R. Davies</u>	Beginning Date 2/26/85	Ending Date 2/27/85
Verification of Field Data by <u>P. Niland, J.H. Shofner, C. Graupe</u>	Time (Hours) 221	Ending Date 1/9/86
Verification Check by <u>J.S. Stringham, B.A. Olmstead, J.S. Green</u>	Time (Hours) 18.5	Ending Date 2/3/86
Evaluation and Analysis by <u>G.E. Kay</u>	Time (Hours) 42	Ending Date 2/1/86
Inspection by <u>D.J. Hill</u>	Time (Hours) 2	Ending Date 2/10/86

PACIFIC MARINE CENTER
EVALUATION REPORT
H-10163

1. INTRODUCTION

H-10163 was accomplished by the NOAA Ship RAINIER (S-221) in accordance with the following project instructions:

OPR-0168-RA-84; Behm Narrows, Alaska, dated August 9, 1984
Change No. 1, dated August 17, 1984

This is a basic survey situated in Behm Canal. The western limit of this survey is at longitude $131^{\circ}23'00''\text{W}$ where it joins H-10159. This western limit is flanked by Point Lees to the north and Claude Point to the south. The survey area then extends eastward between Revillagigedo Island and the Cleveland Peninsula, 5.5 nautical miles to longitude $131^{\circ}14'00''\text{W}$.

The bottom slopes steeply away from the shoreline to deep depths of 73 fathoms near the western limits and 232 fathoms in the southeastern area.

Predicted tides based on the Ketchikan, Alaska (945-0460) gage were used during field processing. Tide correctors used for the final reduction of soundings reflect hourly heights zoned from Fitzgibbon Cove, Alaska (945-0879).

The field sheet parameters have been revised to center the hydrography on the smooth sheet and to change the projection to polyconic. The electronic correctors have been revised during office processing to reflect small changes in the meaned baseline calibrations. The revised data is listed in the smooth position/sounding printout.

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

2. CONTROL AND SHORELINE

Hydrographic control and positioning are adequately discussed in sections F and G of the hydrographer's report and in the Horizontal and Electronic Control Reports for OPR-0168-RA-84.

Horizontal control station positions used during hydrography are published positions based on the North American Datum of 1927.

The applicable shoreline manuscript is TP-01160. This map is a registered Class III, and originates from photography dated June 1982.

The notes "rock bluff" and "rocky beach" were transferred in numerous places to the smooth sheet from comments in the raw records.

3. HYDROGRAPHY

Soundings at line crossings are in good agreement. Delineation of the bottom configuration, determination of least depths, and development of standard depth curves are adequate except for the three, two, one and zero-fathom curves, which were not completely defined because of the steep, sloping bottom.

4. CONDITION OF SURVEY

The hydrographic records and reports are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change 3, except as noted in the Preprocessing Examination Reports, dated March 6, 1985, and as follows:

The hydrographer junctioned with prior survey H-5174. Project Instructions, section 6.10, listed H-5174 as a prior, therefore a junction was not needed.

5. JUNCTIONS

H-10163 junctions H-10159 (1984) 1:10,000, to the west. Soundings were transferred from H-10159 (1984) to effect an adequate junction.

There are no contemporary surveys to the east, however, a comparison with charted depths reveals good agreement with the present survey.

6. COMPARISON WITH PRIOR SURVEYS

H-5103 (1930) 1:20,000

H-5174 (1931) 1:20,000

Present survey data compares well with these prior surveys. The hydrographer's determination of large differences in prior and present depths is attributable to differences in sounding and positioning techniques. There is no substantial evidence that any significant change in depth has occurred since 1930-31. Several features not found during this survey, and not considered disproven, have been brought forward to this survey from the priors. These features are:

<u>Feature</u>	<u>Prior Survey</u>	<u>Latitude North</u>	<u>Longitude West</u>	<u>Color</u>
rock awash at HW	H-5174	56°00'01.5"	131°15'42.5"	Brown ✓
rock awash at HW	H-5174	55°57'22.5"	131°20'00.0"	Brown ✓
"Tide Rips" (Note)	H-5174	55°57'31.0"	131°19'55.0"	Brown ✓
rock (7)	H-5103	55°57'24.0"	131°22'00.0"	Violet ✓
rock (11)	H-5103	55°56'40.5"	131°22'21.0"	Violet ✓

The rock uncovering 7 ft at MLLW mentioned above was searched for and not found. It was transferred to the smooth sheet because the hydrographer stated that this rock may exist within 10 meters from shore (reference hydrographer's report section L).

There are no AWOIS items located within the survey limits.

H-10163 is adequate to supersede the prior surveys within their common areas.

7. COMPARISON WITH CHART

Chart 17422, 6th Edition, dated August 15, 1981; scale 1:79,000.

a. Hydrography - Charted information originates with the prior surveys discussed in section 6 of this report. For additional information see section L of the hydrographer's report.

Five charted islets were neither found or disproven during the course of this hydrographic survey. These islets were also not compiled on the photogrammetric shoreline manuscript. The source of these islets is believed to be survey H-5174. The extreme poor quality of the photographic reproduction provided for comparison purposes precludes an accurate determination.

It is recommended that these features be retained as rocks awash. The islets are charted as follows:

<u>Feature</u>	<u>Latitude North</u>	<u>Longitude West</u>
islet	55°57'28.5"	131°19'41.1" ✓
islet	55°57'31.5"	131°19'30.0" ✓
islet	55°58'11.0"	131°17'12.0" ✓
islet	55°58'04.0"	131°20'51.0" ✓
islet	55°59'31.0"	131°18'09.0" ✓

Geographic names appearing on the smooth sheet have been approved by the Chief Geographer and are plotted in accordance with the chart.

H-10163 is adequate to supersede charted hydrography within the common area.

There have been no dangers to navigation identified or reports submitted by the ship or the Nautical Chart Branch, for this survey.

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

c. Aids to Navigation - There are no aids to navigation within the limits of this survey.

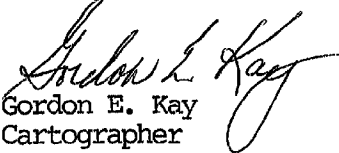
8. COMPLIANCE WITH INSTRUCTIONS

H-10163 adequately complies with the project instructions noted in section 1 of this report.

9. ADDITIONAL FIELD WORK

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

Submitted,


Gordon E. Kay
Cartographer

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



Dennis Hill
Chief, Hydrographic Section

ATTACHMENT TO DESCRIPTIVE REPORT FOR H-10163

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


Chief, Nautical Chart Branch (Date)

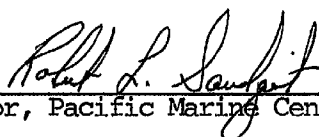
CLEARANCE:

N/MOP2:LWMordock

SIGNATURE AND DATE:

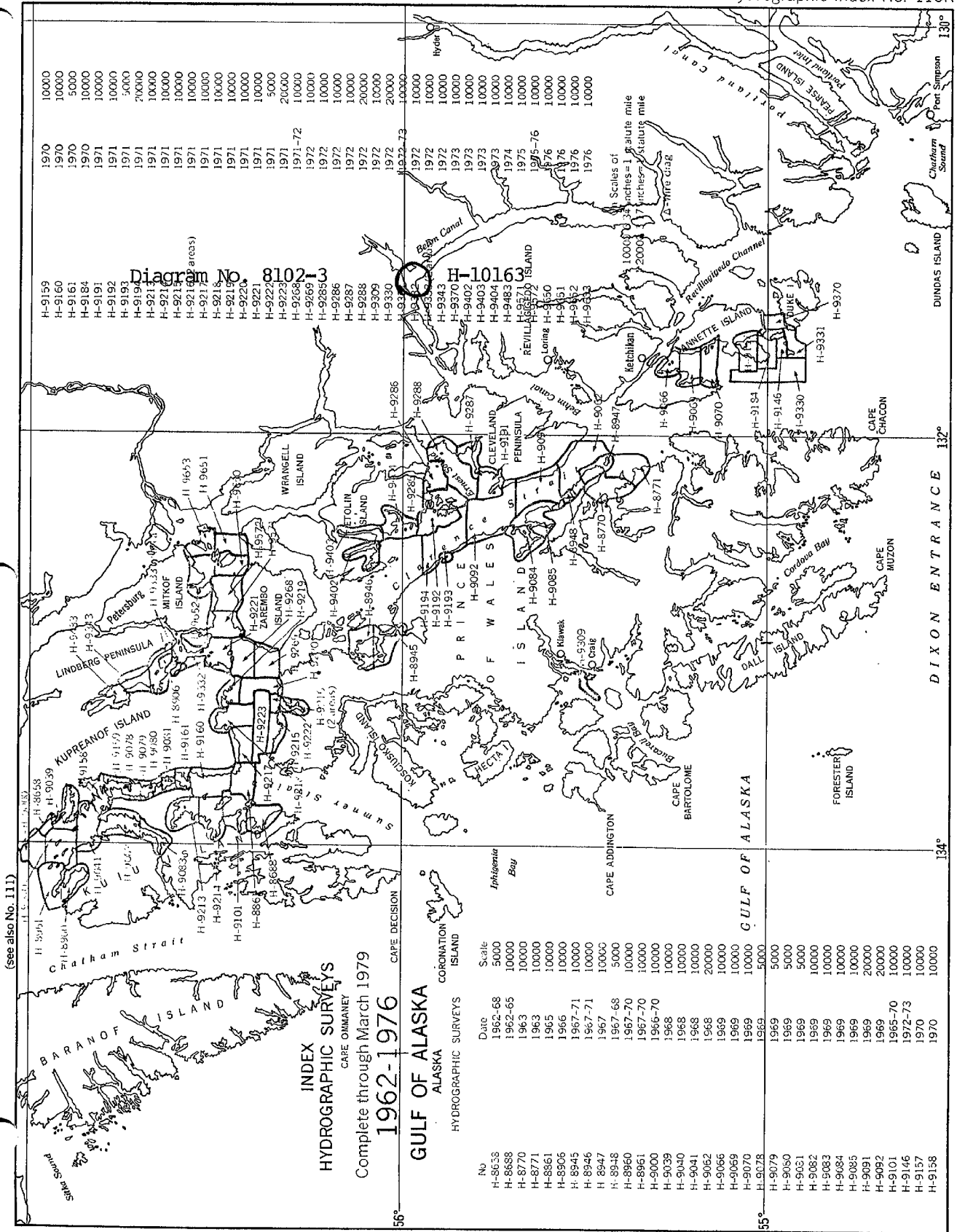


After review of the smooth sheet and accompanying reports, I hereby certify this survey is accurate, complete, and meets appropriate standards with only the exceptions as noted above. The above recommendations are forwarded with my concurrence.


Director, Pacific Marine Center (Date)

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

Hydrographic Index No. 110K



(see also No. 111)

INDEX
HYDROGRAPHIC SURVEYS
CAPE OMMANEY

Complete through March 1979
1962-1976

GULF OF ALASKA
ALASKA

HYDROGRAPHIC SURVEYS

No	Date	Scale
H-8653	1962-68	5000
H-8658	1962-65	10000
H-8770	1963	10000
H-8771	1963	10000
H-8861	1965	10000
H-8806	1966	10000
H-8945	1967-71	10000
H-8946	1967-71	10000
H-8947	1967	10000
H-8948	1967-68	5000
H-8960	1967-70	10000
H-8961	1967-70	10000
H-9000	1966-70	10000
H-9039	1968	10000
H-9040	1968	10000
H-9041	1968	10000
H-9062	1968	20000
H-9066	1969	10000
H-9069	1969	10000
H-9070	1969	10000
H-9078	1969	5000
H-9079	1969	5000
H-9080	1969	5000
H-9081	1969	10000
H-9082	1969	10000
H-9083	1969	10000
H-9084	1969	10000
H-9085	1969	10000
H-9091	1969	20000
H-9092	1969	20000
H-9101	1965-70	10000
H-9146	1972-73	10000
H-9157	1970	10000
H-9158	1970	10000

MARINE CHART BRANCH
RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10163

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
17422	3/22/89	ALMACEN	Full Part Before After Marine Center Approval Signed Via <i>full application of</i> Drawing No. <i>soundings from 55.</i>
17420	3/29/89	ALMACEN	Full Part Before After Marine Center Approval Signed Via <i>full application of</i> Drawing No. <i>soundings thru 55 & 17422</i>
17424	3/25/89	ALMACEN	Full Part Before After Marine Center Approval Signed Via <i>FULL APPLICATION OF</i> Drawing No. <i>SOUNDINGS THRU 55</i>
			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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