

H10759

NOAA FORM 78-35A

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

## DESCRIPTIVE REPORT

Type of Survey ..... Hydrographic  
Field No. .... RA-10-18-97  
Registry No. .... H-10759

### LOCALITY

State ..... Alaska  
General Locality ..... Southwest Alaska Peninsula  
Sublocality ..... Anchorage Bay and Vicinity

1997

CHIEF OF PARTY  
CAPT Alan D. Anderson, NOAA

### LIBRARY & ARCHIVES

DATE ..... AUG 18 1998

**HYDROGRAPHIC TITLE SHEET**

H-10759

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-10-18-97

State Alaska

General locality Southwest Alaska Peninsula

Locality Anchorage Bay and Vicinity

Scale 1:10,000 Date of survey July 13 to August 19, 1997

Instructions dated May 15, 1996 \* Project No. OPR-P182-RA

Vessel RA-1 (2121), RA-2 (2122), RA-3 (2123), RA-4 (2124), RA-5 (2125), RA-6 (2126)

Chief of party CAPT Alan D. Anderson, NOAA

Surveyed by CAPT A. Anderson, LT G. Noll, LCDR G. Glang, LT M. Larsen, LT S. Lemke, LT K. Bailey

LT D. Baird, LTJG S. Maenner, ST J. Jacobson, ST S. Baum, ST N. Shouji, ST J. Cheech

Soundings taken by echo sounder, hand lead, pole DSF-6000N, Knudsen 320M

Graphic record scaled by RAINIER Personnel

Graphic record checked by RAINIER Personnel

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

Verification by M. Bigelow, D. Doles, E. Domingo, R. Mayor, I. Almacen

Soundings in fathoms ~~XXXX~~ at ~~XXXX~~ MLLW and tenths

REMARKS: All times are 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.

\*Change #1 dated June 3, 1997

AWOL/SURF MCR 8/4/98

PROGRESS SKETCH  
 OPR-P182-RA-97  
 SOUTHWEST ALASKA PENINSULA  
 JULY-AUGUST 1997  
 CAPT A. D. ANDERSON, NOAA  
 COMMANDING  
 CHART 16566

Sheet	Reg_No	Started	Percent	Completed	Submitted	SQNM
J	H-10761	7/10	100	8/2		29.3
K	H-10762	7/10	100	8/1		14.4
L	H-10765	7/19	100	8/20		12.6
M	H-10767	7/30	100	8/24		17.0
P	H-10780	7/14	100	8/19		13.8
S	H-10759	7/13	100	8/19		7.9
V	H-10701	7/24	100	8/25		16.0
Q	H-10768	8/5	100	8/22		11.4
X	H-10770	8/15	100	8/26		20.8

Downtime_Type	July	August
Weather - Hr	0	4
Mechanical -Hr	0	2
Electronic -Hr	0	2

Accomplished	July	August
LNM Hydro	2539.4	1732.6
LNM SSS	20.83	15.85
SQ NM	77.9	224.5
AWOIS Invest.	5	0
Other Invest.	1	8
LNM Multibeam	0	68.5

Additional lines  
 H-10701

holidays in  
 1996 work  
 to be done in 1997

Sheet L  
 12.6 sq nm  
 100%

Sheet K  
 14.4 sq nm  
 100%

Sheet M  
 17.0 sq nm  
 100%

Sheet P  
 13.8 sq nm  
 100%

Sheet Q  
 11.4 sq nm  
 100%

Sheet U  
 20.3 sq nm  
 100%

Sheet V  
 18 sq nm  
 100%

Sheet X  
 20.8 sq nm  
 100%

Sheet S  
 7.9 sq nm  
 100%

1996  
 JULY  
 AUGUST

# Descriptive Report to Accompany Hydrographic Survey H-10759

Field Number RA-10-18-97

Scale 1:10,000

July-August 1997

**NOAA Ship RAINIER**

Chief of Party: Captain Alan D. Anderson, NOAA

## A. PROJECT ✓

This hydrographic survey was completed as specified by Project Instructions OPR-P182-RA dated May 15, 1996, and change number 1 dated June 3, 1997. Survey H-10759 corresponds to sheet S as defined in the sheet layout. The purpose of this survey is to provide contemporary surveys for updating National Ocean Service (NOS) nautical charts. The majority of charted hydrography in the 1997 project area is from 1924 and 1925 lead-line hydrographic surveys. Requests for hydrographic surveys and updated charts in this area have been received from a U.S. Senator, a U.S. Congressman, the United States Coast Guard (USCG), the commercial fishing industry, and NOAA.

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

The survey area is in the Southwest Alaska Peninsula, in Anchorage Bay, Mud Bay, and the approaches to Chignik Lagoon. The survey limits are  $56^{\circ} 21' 30''$  N to the north,  $158^{\circ} 21' 45''$  W to the east, and it is bound by the mainland to the west and to the south. Data acquisition was conducted from July 13 to August 19, 1997 (DN 194-231).

## C. SURVEY VESSELS ✓

Data were acquired by RAINIER and her survey launches as noted in the Survey Information Summary included with this report.

## D. AUTOMATED DATA ACQUISITION AND PROCESSING ✓

All data were acquired and processed using the Hydrographic Data Acquisition and Processing System (HDAPS.) The final field sheet was generated using MapInfo (Version 4.1) and MapBasic software developed by N/CS32 and modified by Rainier personnel. A complete listing of software for HDAPS is included in Appendix VI. \*

## E. SONAR EQUIPMENT ✓ *See Eval Rpt., section E.*

Side scan sonar (SSS) operations were conducted in the entrance channel. An EG&G model 260 slant-range corrected SSS recorder (S/N 0012106) and an EG&G 272-T-dual channel towfish (S/N 016989) were used. The towfish was operated on the 100 kHz frequency.

Two hundred percent SSS collection was conducted over the entrance channel to Chignik Lagoon and in portions of Anchorage Bay. The SSS towfish was towed with a 70 meter EG&G lightweight tow cable on launch 2123 and a 40-meter cable on launches and 2125. The towfish was deployed manually from the port or starboard quarter and attached to the aft fall shackle by line on 2123 and 2125. The cable was lead over the stern railing and towed directly astern of the survey launch. The length of tow cable deployed was determined by noting the measured markings on the towfish cable as these markings met the stern railing. The SSS towfish was adjusted to maintain a height off the bottom of 8 to 20 percent of the range scale. The 100-meter and 150-meter range scales were used. SSS operations were conducted at or less than 5 knots for the 100-meter range scale and 4.5 knots for the 150-meter range scale.

*(Only a 100% SSS coverage was accomplished around the area north of Rabbit point.)*

*\* Filed with the hydrographic data.*

Degraded sonograms were rejected and rerun. A swath plot depicting SSS bottom coverage indicates that 200% SSS coverage was completed in all areas. The recorder gain setting was adjusted for the best return for changing bottom conditions. Rub tests were conducted prior to operating the SSS and confidence checks were made daily and annotated on the sonogram.

Side scan sonograms were manually scanned for significant contacts in accordance with section 7.3.2 of the project instructions. No significant contacts were identified. <sup>Concur</sup> Multi-beam echo sounder equipment was not used on this survey. *concur.*

## F. SOUNDING EQUIPMENT ✓

The Raytheon DSF-6000N is a dual frequency (100 kHz, 24 kHz), paper trace echo sounder. The Knudsen 320M is a dual frequency, thermal depth sounder using the same transducer frequencies. Serial numbers are included on the headers of the daily Raw Master Printouts. <sup>Concur</sup> No new problems, which affect survey data, were encountered. All soundings were acquired in meters using the High + Low, high frequency digitized setting.

## G. CORRECTIONS TO ECHO SOUNDINGS ✓

<sup>Two</sup> ~~Three~~ sound velocity casts <sup>(# 2 & 5)</sup> were used for this survey. Information on the casts is included in the Survey Information Summary report. <sup>Concur</sup> The sound velocity casts were acquired with SBE SEACAT Profiler (S/N 219), calibrated December 16, 1996.

Velocity correctors were computed using the PC programs SEACAT and VELOCITY, version 3.3 (1997), in accordance with Field Procedure Manual (FPM) Section 2.4.3. A printout of the Sound Velocity Corrector Table used in the HDAPS Post Survey program is included in the "Separates to be Included with Survey Data, IV." <sup>Concur</sup> Sounding Equipment Calibrations and Corrections".

A static transducer depth was determined using FPM Fig 2.2 for vessels 2121-2126 in the spring of 1997. 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-P182-RA. <sup>Concur</sup> The data for vessels 2121, 2122, and 2123 were collected in Shilshole Bay, Washington in the Spring of 1997; data for vessels 2124 and 2126 were measured in the same location in Spring of 1996. The data for 2125 was collected near Scull Island, Alaska in March 1997. All offset tables contain offsets for the GPS antenna, as well as static draft measurements, and settlement and squat data. Offset tables 1-6 correspond to the last digit of the vessel number. The offset tables are included with project data for OPR-P182-RA. <sup>Concur</sup> The launches are not equipped with heave, roll and pitch sensors.

The Coastal and Estuarine Oceanography Branch (N/OES334) through N/CS31 provided predicted tides for the project on diskette for the Southwest Alaska Peninsula, West End, Sutwik Island, Alaska reference station (945-8665). HDAPS listings of the data used in generating tide corrector tables are included in Appendix V <sup>Concur</sup> of this report. Predicted zoning for tidal correctors as provided in the project instructions for H-10759 are in the Survey Information Summary included with this report.

Sand Point, Alaska (945-9450) is the primary control station for datum determination at all subordinate stations. RAINIER personnel installed a Sutron 8200 tide gage at Chignik (945-8917) on July 12, 1997 and at Unavikshak Island (945-8762) on July 09, 1997. RAINIER removed the Chignik gage on August 26, 1997 and removed the Unavikshak Island gage on August 27, 1997. It is recommended that Chignik tide gage data be used for datum reduction for soundings on this survey. Refer to the Field Tide Notes and supporting data in Appendix V <sup>Concur</sup> for individual gage performance and level closure information. This information has been forwarded to N/OES212 in accordance with HSG 50 and FPM 4.3. A request for approved tides was forwarded at the completion of the project to N/OES23. *Approved Tide Note dated January 5, 1998 is attached.*

*\* Filed with the hydrographic data.*

## H. CONTROL STATIONS (See EVAL RPT., Sec. 8)

The horizontal datum for this project is NAD 83. Stations ANG and SHAK were recovered and used as primary hydrographic positioning control for the survey. The control stations used for this survey are listed in <sup>(included in</sup> Appendix III. See the OPR-P182-RA-97 Horizontal Control Report for more information. <sup>list of</sup> <sup>this report</sup>

## I. HYDROGRAPHIC POSITION CONTROL (See EVAL RPT., Sec. 7)

All soundings were positioned using differential GPS. Primary control were the VHF differential reference stations at SHAK and ANG. The US Coast Guard Beacon at KODIAK was used when VHF was not available. Launch-to-launch DGPS performance checks were performed in accordance with Section 3.4.4 of the FPM. Two observations of position were made from two different DGPS base stations, SHAK or ANG and KODIAK, while the launches were rafted together with their GPS antennae within 2-3 meters of each other. RAINIER also used SHIPDIM, version 2.2R (April 1996) with a Trimble Centurion P-code receiver and an Ashtech sensor (both differentially-corrected) to monitor the performance of the USCG Beacon. SHAK or ANG were also periodically compared to KODIAK and COLD BAY during 8-hour daily comparisons and occasional performance checks. Some outliers were noted, but none indicated systematic or continuous errors in the KODIAK beacon. The SHIPDIM OUTLIER.SUM results are included in the project data for OPR-P182-RA.

## J. SHORELINE (See EVAL RPT., Sec. 5)

The shoreline manuscript from Coastal Mapping survey CM-8309 <sup>was</sup> supplied by N/CS341. TP-00907 was transferred by hand to the boat sheets for comparison in the field. <sup>TP-00911 & TP-00913</sup>

Features shown on the SHORELINE NOTES layer in the MapInfo workspace inshore of the NALL are the hydrographer's representation of the shoreline while slowly transiting along the shore, and are intended to aid chart compilation. *Field information was analyzed during office processing and features are shown on the smooth sheet as warranted.*

Shoreline manuscript and field features were compared to an enlargement of chart 16566 8<sup>th</sup> Edition, August 3, 1996 BSB version. This was converted to a raster image and registered in MapInfo, and plotted at survey scale by RAINIER personnel. There was general agreement between the charted shoreline and between the photogrammetric shoreline and the hydrographer's fieldwork.

The following paragraphs list the differences noted between the manuscript, chart, and this survey:

- A new dolphin at position 56° 17' 47.10"N, 158° 24' 08.18"W, (Fix 20014). *(Located off the NW corner of pier) Chart dolphin as shown on the smooth sheet. (21)*
- A new mooring buoy at position 56° 18' 01.66"N, 158° 24' 17.18"W, (Fix 20015). *Chart mooring buoy as shown on the smooth sheet*
- A new mooring buoy at position 56° 18' 28.28"N, 158° 23' 13.00"W, (Fix 20000). *Chart mooring buoy as shown on the smooth sheet.*
- A new mooring buoy at position 56° 18' 20.27"N, 158° 23' 10.51"W, (Fix 20003). *Chart mooring buoy as shown on the smooth sheet.*
- A new barge <sup>(wreck)</sup> at position 56° 18' 31.22"N, 158° 22' 52.57"W, (Fix 20004). *(Located off the S shore of Chignik Spit) Chart wreck (barge) as shown on the smooth sheet.*
- The historic fish fence <sup>charted</sup> located at the sand spit near the entrance to Chignik Lagoon was not seen. *Delete charted fish fence*
- The manuscript pier <sup>at</sup> 56° 17' 56.09"N, 158° 23' 06.82"W, (Fix 20781 and 20782), was ruins. *Chart feature as a pier ruins (MNU)*

## K. CROSSLINES ✓

Crosslines agreed within 1 meter with mainscheme hydrography. There was a total of 17.3 nautical miles of

crosslines, comprising 7.2% of mainscheme hydrography.

#### L. JUNCTIONS (See EVAL RPT., Sects. L)

This survey junctions with H-10760, 1:10,000, 1997 to the north, H-10699, 1:10,000, 1996 to the east and north, and H-10768, 1:10,000, 1997 to the west. Soundings on these surveys were found to be in good agreement. Part of the early mainscheme was collected north of the junction line and subsequent developments were completed as part of survey H-10760. Final comparisons will be made at the Pacific Hydrographic Branch (PHB) after reduction to final vertical datum.

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

Prior surveys H-2860, 1:20,000, 1906 and H-4389, 1:20,000, 1924 were compared with H-10759. Due to modern survey techniques and positioning systems there were numerous instances where H-10759 revealed shoaler depths than the prior surveys. Sounding comparisons are discussed in Section O.

Final comparisons will be performed at the Pacific Hydrographic Branch (PHB) after final tides have been applied to H-10759.

#### N. ITEM INVESTIGATIONS (See EVAL RPT., Sec. N)

AWOIS item number 52346 was a marine railway terminal incorrectly depicted as a visible wreck. The hydrographer recommends removing the wreck symbol and placing the symbol for a marine railway terminal ruin inshore of position  $56^{\circ} 17' 42.70''\text{N}$ ,  $158^{\circ} 24' 06.48''\text{W}$ , (Fix 20012). AWOIS's 52298, 52344, and 52345 are discussed in Supplemental Correspondence, section VI. *included in this report.*

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

Chart 16566, 1:77,477, 8th Edition, 8/3/96 is the largest scale chart covering the survey area. Soundings from this survey are generally shoaler than charted soundings. Nine charted soundings were shoaler than those from H-10759. The table below summarizes the results.

SOUNDING	POSITION	PRIOR SURVEY	LEAST DEPTH	RECOMMENDATIONS
12 fm (22 m) ✓	Lat. $56^{\circ} 20' 04''\text{N}$ Lon. $158^{\circ} 23' 23''\text{W}$	H-4389 2860	13.2 fm (24m) Fix 20209+1	Chart soundings from current survey
17 fm (31 m) ✓	Lat. $56^{\circ} 20' 01''\text{N}$ Lon. $158^{\circ} 22' 11''\text{W}$	H-4389 2860	18.819 fm (35m) Fix 10169+4	Chart soundings from current survey
9 fm (16.5 m) ✓	Lat. $56^{\circ} 20' 18''\text{N}$ Lon. $158^{\circ} 24' 27''\text{W}$	H-4389 2860	11.3 fm (21m) Fix 60478+3	Chart soundings from current survey
8 fm (14.6 m) ✓	Lat. $56^{\circ} 20' 09''\text{N}$ Lon. $158^{\circ} 25' 11''\text{W}$	H-4389	8.6 fm (15.8m) Fix 30503+7	Chart soundings from current survey
14 fm (26 m) ✓	Lat. $56^{\circ} 19' 48.19''\text{N}$ Lon. $158^{\circ} 23' 16''\text{W}$	H-4389 2860	16.3 fm (30m) Fix 20854+5	Chart soundings from current survey
16 fm (29 m) ✓	Lat. $56^{\circ} 20' 42''\text{N}$ Lon. $158^{\circ} 23' 38''\text{W}$	H-4389 2860	17 fm (31m) Fix 10310+3	Chart soundings from current survey
13 fm (24 m) ✓	Lat. $56^{\circ} 20' 24''\text{N}$ Lon. $158^{\circ} 23' 43''\text{W}$	H-4389 2860	15.2149 fm (27m) Fix 21011+5	Chart soundings from current survey
11 fm (20 m) ✓	Lat. $56^{\circ} 20' 10''\text{N}$ Lon. $158^{\circ} 23' 44''\text{W}$	H-4389 2860	13.4 fm (24m) Fix 10316+1	Chart soundings from current survey
17 fm (31 m) ✓	Lat. $56^{\circ} 20' 33''\text{N}$ Lon. $158^{\circ} 23' 03''\text{W}$	H-4389 2860	19.0186 fm (36m) Fix 10256+6	Chart soundings from current survey

Soundings from the prior surveys and the current survey are generally in good agreement and the soundings from this survey used for the comparison in the table above compare with the prior soundings within ~~50~~ <sup>5.0</sup> meters. The hydrographer recommends that all charted soundings within the survey area be superseded by H-10759. *Concur. Chart the area based on the present survey.*

Non-sounding features are discussed in Section J. Final sounding comparisons will be made at PHB after reduction to final vertical datum.

Dangers to Navigation ✓ *See Eval Rpt., Section O.*

One danger to navigation was reported to the 17<sup>th</sup> Coast Guard by the hydrographer <sup>on August 28, 1997</sup>. A depth of 14.3 meters, 7 3/4 fathoms, was found at 56° 20' 14.13"N, 158° 23' 47.64"W (fix 20999 +04). *An 8.1 fathoms depth was found after reduction of soundings based on actual tides. Copy of the report is attached.*

P. ADEQUACY OF SURVEY ✓

Survey H-10759 is complete and adequate to supersede prior soundings and features in their common areas. *Concur*

Q. AIDS TO NAVIGATION ✓

Chignik Spit Light was positioned using static GPS 3<sup>rd</sup> order class 1 from station ANG position 56° 18' 34.99"N, 158° 23' 00.24"W.

R. STATISTICS ✓

This survey contained 18,039<sup>87</sup> selected soundings; additional statistics are listed in the Survey Information Summary included with this report.

S. MISCELLANEOUS ✓

Bottom samples were collected and sent to the Smithsonian in accordance with Project Instructions. No unusual tidal currents or magnetic variations were found during this survey.

T. RECOMMENDATIONS ✓

None.

U. REFERRAL TO REPORTS ✓

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

<u>Title</u>	<u>Date Sent</u>	<u>Office</u>
OPR-P182-RA Horizontal Control Report	September 1997	N/CS34
OPR-P182-RA 1997 Coast Pilot Report	September 1997	N/CS26
Project related data for OPR-P182-RA	Incremental	N/CS34
Secchi Disk Observations for OPR-P182-RA	September 1997	N/CS31

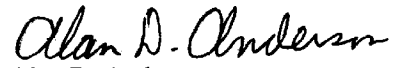


Respectfully Submitted,



Steven A. Lemke  
Lieutenant, NOAA

Approved and Forwarded,



Alan D. Anderson  
Captain, NOAA  
Commanding Officer

## CONTROL STATIONS as of 9 Dec 1997

No	Type	Latitude	Longitude	H Cart	Freq	Vel Code	MM/DD/YY	Station Name
001	G	056:50:09.724	157:43:12.024	162	250	0.0	00/00/97	SHAK
002	G	056:26:06.955	158:17:01.936	33	250	0.0	00/00/97	ANS
100	G	057:57:07.800	152:11:21.000	0	250	0.0	A 03/01/94	KODIAK 313 KHZ USCG DGPS
101	G	055:05:30.000	162:31:54.000	0	250	0.0	B 06/25/96	COLD BAY 287 KHZ USCG DGPS
003	G	056:21:50.300	157:50:26.735	310	250	0.0	00/00/97	HAR
004	G	056:18:34.550	158:23:01.380	24	0	0.0	00/00/97	CHIGNIK LT



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  
August 28, 1997

**ADVANCE  
INFORMATION**

Commander (mon)  
Seventeenth Coast Guard District  
Post Office Box 25517  
Juneau, Alaska 99802-5517

Dear Sir:

The following dangers to navigation should be included in the Local Notice to Mariners. They were positioned by the NOAA Ship RAINIER while a conducting hydrographic surveys in the vicinity of Chignik Bay, Alaska. The dangers are shown on the three pages of attached chartlet and affect chart 16566, 8TH ED., 96/08, 1:77,477, NAD 83. Depths of features are referenced to Mean Lower Low Water using predicted tides.

FEATURE	DEPTH (Fathoms)	LATITUDE (N)	LONGITUDE (W)	POSITION	Depth (Meters)	Survey Number
Shoal	8 ¾	56:21:02.864	157:47:54.013	"10511+3"	16.1	H-10770
Shoal	4 ¾	56:20:56.574	157:54:28.371	"20031+6"	8.9	""
Shoal	3 ¾	56:21:03.582	157:48:16.931	"10521+4"	6.2	""
* Shoal	7 ¾	56:20:14.131	158:23:47.644	"20999+4"	14.3	H-10759
Rock	5 ¾	56:21:45.730	158:25:05.943	"60000+0"	10.8	H-10760/H-10759
Rock	5 ¾	56:22:36.980	158:23:54.010	"60479+0"	10.8	""
Rock	5 ½	56:22:13.660	158:25:48.307	"60480+0"	10.3	""
Rock	2 ½	56:24:49.525	158:24:13.456	"60514+0"	4.8	""
Rock	1 ¾	56:23:35.287	158:26:00.622	"60515+0"	3.4	""
Rock	1 ½	56:26:12.124	158:24:02.193	"60482+0"	3.1	""
Shoal	3	56:25:51.506	158:14:57.358	"10563+6"	5.5	H-10767
Shoal	4	56:30:20.082	158:02:56.410	"30303+6"	7.8	H-10765
Shoal	7 ¾	56:26:07.352	157:48:41.918	"10082+1"	14.6	H-10761

This is advance information subject to office review. Questions concerning this letter should be directed to the Chief, Pacific Hydrographic Branch, (206) 526-6835. Refer to survey project OPR-P182-RA-97 and Danger to Navigation message RA-5-97. More information on current RAINIER survey projects may be obtained by e-mail; contact the Field Operations Officer at [FOO.RAINIER@NOAA.GOV](mailto:FOO.RAINIER@NOAA.GOV).

Sincerely,

*Alan D. Anderson*  
Alan D. Anderson  
Captain, NOAA  
Commanding Officer

Attachment

cc: NIMA  
PMC  
N/CS261  
N/CS34





**ADVANCE  
INFORMATION**

Lotus cc:Mail for FOO Rainier

Author: FOO Rainier at Rainier

Date: 9/1/97 14:47

Priority: Normal

TO: akcgnav@alaska.net at RDC, dhill@pachydro.noaa.gov at RDC,  
ktimmons@pachydro.noaa.gov at RDC, navinfonet@nima.mil at RDC

CC: CO Rainier, Chief Survey Technician Rainier, Larry [OPS-PMC] Mordock at RDC

Subject: DTON message for USCG/NIMA/PHB/Chart Section

The following dangers to navigation should be included in the Local Notice to Mariners. They were positioned by the NOAA Ship RAINIER while a conducting hydrographic surveys in the vicinity of Chignik Bay, Alaska. The dangers are digitally rendered in the attached MapInfo file (ver 4.1, zipped). They affect chart 16566, 8TH ED., 96/08, 1:77,477, NAD 83.

FEATURE	DEPTH (Fathoms)	LATITUDE (N)	LONGITUDE (W)	POSITION Number	Depth (Meters)	Survey Number
Shoal	8 3/4	56:21:02.864	157:47:54.013	"10511+3"	16.1	H-10770
Shoal	4 3/4	56:20:56.574	157:54:28.371	"20031+6"	8.9	"
Shoal	3 1/4	56:21:03.582	157:48:16.931	"10521+4"	6.2	"
* Shoal	7 3/4	56:20:14.131	158:23:47.644	"20999+4"	14.3	H-10759
Rock	5 3/4	56:21:45.730	158:25:05.943	"60000+0"	10.8	H-10760
Rock	5 3/4	56:22:36.980	158:23:54.010	"60479+0"	10.8	"
Rock	5 1/2	56:22:13.660	158:25:48.307	"60480+0"	10.3	"
Rock	2 1/2	56:24:49.525	158:24:13.456	"60514+0"	4.8	"
Rock	1 3/4	56:23:35.287	158:26:00.622	"60515+0"	3.4	"
Rock	1 1/2	56:26:12.124	158:24:02.193	"60482+0"	3.1	"
Shoal	3	56:25:51.506	158:14:57.358	"10563+6"	5.5	H-10767
Shoal	4 1/4	56:30:20.082	158:02:56.410	"30303+6"	7.8	H-10765
Shoal	7 3/4	56:26:07.352	157:48:41.918	"10082+1"	4.6	H-10761

This is advance information subject to office review. Questions concerning this letter should be directed to the Chief, Pacific Hydrographic Branch, (206) 526-6835. Refer to survey project OPR-P182-RA-97 and Danger to Navigation message RA-5-97. More information on current RAINIER survey projects may be obtained by e-mail; contact the Field Operations Officer at FOO.RAINIER@NOAA.GOV.

/S/ Captain Alan D. Anderson, NOAA

*\* Shoal depth was 8.1 fathoms based on actual tides .*



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
OFFICE OF COAST SURVEY  
Pacific Hydrographic Branch  
Seattle, Washington 98115-0070

June 3, 1998

**ADVANCE  
INFORMATION**

Commander (OAN)  
Seventeenth Coast Guard District  
P.O. Box 25517  
Juneau, AK 99802

Dear Sir:

During office review of hydrographic survey H-10759, Alaska, Southwest Alaska Peninsula, Anchorage Bay and Vicinity, two (2) additional dangers to navigation have been identified and affects the following chart.

Chart	Edition/Date	Scale	Datum
16566	9th/Mar. 7, 1998	1:77,477	NAD83

The attached information is provided for publication in the Local Notice to Mariners.

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

Sincerely,

Kathryn Timmons  
Commander, NOAA  
Chief, Pacific Hydrographic Branch

Enclosures

cc: NIMA  
N/CS261



REPORT OF DANGERS TO NAVIGATION

Hydrographic Survey Registry Number: H-10759

Survey Title:           State:           ALASKA  
                          Locality:       SOUTHWEST ALASKA PENINSULA  
                          Sublocality:   ANCHORAGE BAY AND VICINITY

Project Number: OPR-P182-RA, NOAA Ship RAINIER

Survey Date:        July 13-August 19, 1997

Soundings are reduced to Mean Lower Low Water using approved tides and are positioned on NAD 83.

Chart affected:    16566, 9th Edition/Mar. 7, 1998, scale 1:77,477, NAD 83

<u>DANGER TO NAVIGATION</u>	<u>LATITUDE(N)</u>	<u>LONGITUDE(W)</u>
Shoal, covers 7 1/2 fathoms	56/20/01.9	158/23/41.9
Shoal, covers 7 1/2 fathoms	56/21/15.7	158/25/14.4

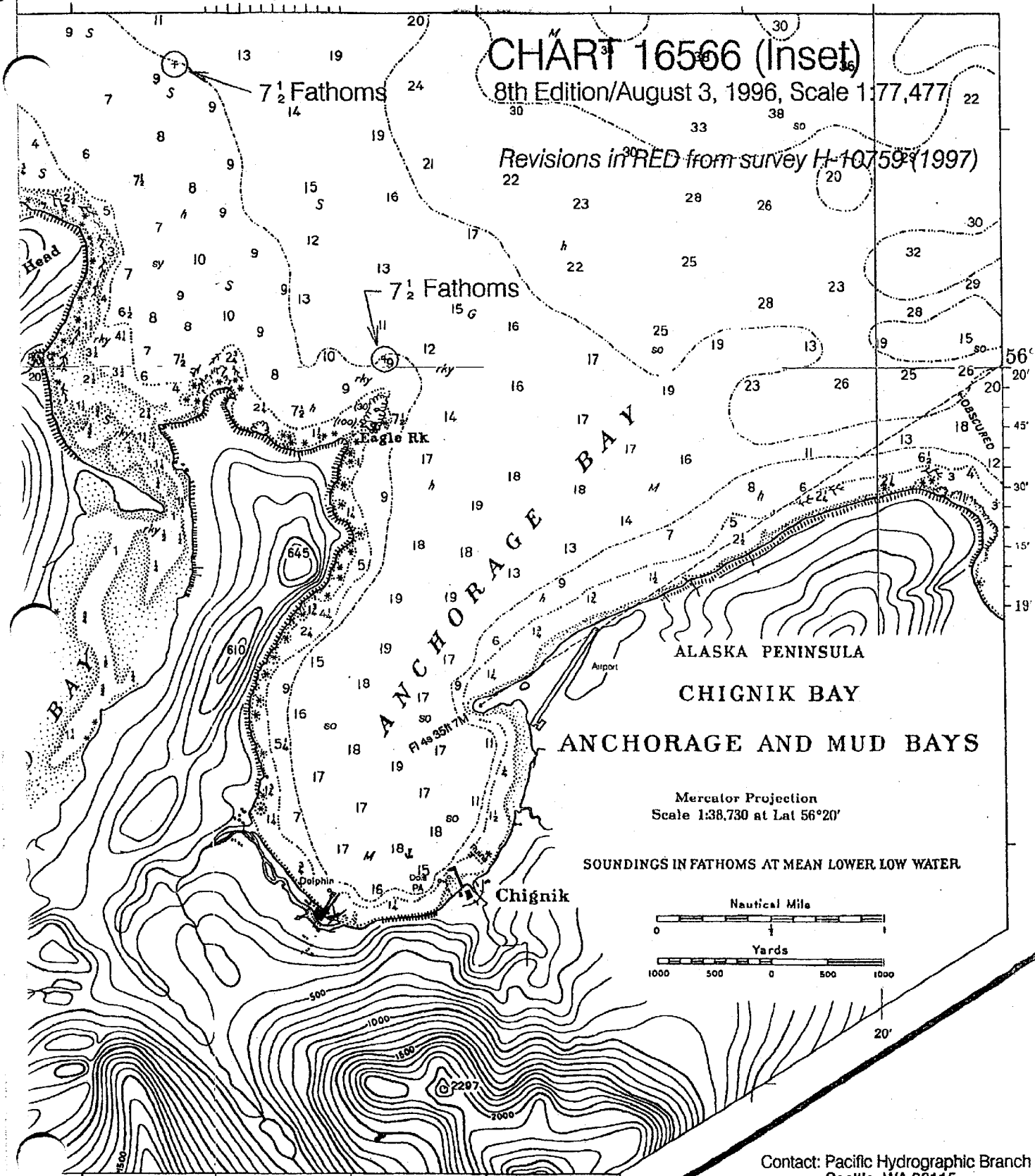
Questions concerning this report should be directed to the Chief, Pacific Hydrographic Branch at (206) 526-6835.

158° 25' 45' 30' 15' 24'

# CHART 16566 (Inset)

8th Edition/August 3, 1996, Scale 1:77,477

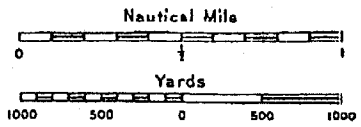
Revisions in RED from survey H-10759 (1997)



## ANCHORAGE AND MUD BAYS

Mercator Projection  
Scale 1:38,730 at Lat 56°20'

SOUNDINGS IN FATHOMS AT MEAN LOWER LOW WATER.



Contact: Pacific Hydrographic Branch  
Seattle, WA 98115  
(206) 526-6836

158° 25'





Figure 1. AWOIS's 52298, 52345, and 52344

AWOIS 52298, (Pos. 20007)      AWOIS 52345, (Pos. 20008)\*      AWOIS 52344 and 52345 (Pos. 20009)\*

AWOIS items numbers 52344 and 52345 are a combination of the corner of the NW corner of the new pier extension and a reported dolphin  $56^{\circ} 17' 52.07''\text{N}$ ,  $158^{\circ} 23' 15.08''\text{W}$  (Fix 20009). The extension of the pier face brought the WSW corner of the pier face flush with the reported dolphin. The ENE offshore corner of the pier is at  $56^{\circ} 17' 53.10''\text{N}$ ,  $158^{\circ} 23' 12.86''\text{W}$  (Fix 20008). The hydrographer recommends charting the pier extensions and dolphin as noted in the DP records. AWOIS item number 52298 is a dolphin at position  $56^{\circ} 17' 53.26''\text{N}$ ,  $158^{\circ} 23' 11.89''\text{W}$  (Fix 20007). The hydrographer recommends charting the dolphin as noted in the DP notes.

\* Positions are corners of Chignik Pribilof Pier.

## Section Q: Descriptive Report Insert ✓

Name of Aid: Chignik Spit Light  
Light List #: 27060

Method of Positioning                      GPS:     DGPS:     Other: \_\_\_\_\_

### Positioning Information

	<u>Latitude (N)</u>	<u>Longitude (W)</u>
Charted Pos.	56.30972	158.3834
Survey Pos.	56.3096	158.3837
	<u>56/18/34.99</u>	<u>158/23/00.24</u>
	<u>Easting</u>	<u>Northing</u>
Charted Pos.	21555.8	34506.4
Survey Pos.	21566.3	34492.4

Difference between Charted and Surveyed Position:                      Distance: 18 meters  
(Bearing from Surveyed to Charted Position)                      Bearing: 323 deg T

### Characteristics

Do characteristics match Light List?                      Yes                       No   
If no, what are the characteristics? \_\_\_\_\_

Does the aid adequately serve its apparent purpose?                      Yes                       No   
If no, why not? \_\_\_\_\_

### New/Uncharted Aids

(if information is known or easily obtained)

Date Est: \_\_\_\_\_

Maintained By: \_\_\_\_\_

Is aid seasonally maintained? \_\_\_\_\_

Frequency of Maintenance: \_\_\_\_\_

Private?                      Yes                       No   
   Yes                       No

Apparent Purpose: \_\_\_\_\_

Other Information:

# Survey Information Summary

**Project:** OPR-P182-97    **Project Name:** SW ALASKA PENINSULA - YEAR 2  
**Instructions Dated:** 5/15/96    **Project Change Info:**

Change #	Dated
1	6/3/97

  
**Sheet Letter:** S    **Registry Number:** H-10759  
**Sheet Number:** RA-10-18-97  
**Survey Title:** ANCHORAGE BAY  
**Data Acquisition Dates:**    **From:** 13-Jul-97 194    **To:** 19-Aug-97 231

### Vessel Usage Summary

VESNO	MS	SPLITS	DEV	XL	S/L	DP	BS	DIVE
2121	1	1						
2122	4	5	6	3	3	4		
2123	4	1	1	2	1			
2124		2		1				
2125			1		1		1	
2126	4	3		1				

### Sound Velocity Cast Information

Launch Table #	Ship Table #	Cast DN	Max Depth	Position	Applicable DN
5		215	77.2	56/21/28	215 -
				158/22/33	
7	8	227	334	56/23/30	232
				157/52/54	
2	0	198	57.1	56/21/48	FSD - 211
				158/23/25	

### Tide Zone Information

Zone #	Time Corr.	Height Corr.
SAP7	000 hr 00 min	X0.94
SAP8	000 hr 00 min	X0.96

### Tide Gage Information

Tide Gage #	Gage Name	Installed	Removed
945-8762	UNAVIKSHAK IS	7/9/97	8/27/97
945-8917	ANCHORAGE BAY	7/12/97	8/26/97
945-9450	SAND POINT, AK	1/1/90	12/31/99

### Statistics Summary

Type	Total:
BS	33
DEV	38.06
DP	18
MS	240.68
S/L	12.03
SPLIT	151.13
SSS1	19.48
XL	17.32

Percent XL:    7.2%

SQNM:        7.9

APPROVAL SHEET

for

H-10759

RA-10-18-97

Standard procedures were followed in accordance with the Hydrographic Manual, Fourth Edition; the Hydrographic Guidelines; and the 1994 version of 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.



Alan D. Anderson  
Captain, NOAA  
Commanding Officer



**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL OCEAN SERVICE

**TIDE NOTE FOR HYDROGRAPHIC SURVEY**

**DATE:** January 5, 1998

**HYDROGRAPHIC BRANCH:** Pacific  
**HYDROGRAPHIC PROJECT:** OPR-P182-RA  
**HYDROGRAPHIC SHEET:** H-10759

**LOCALITY:** Southwest Alaska Peninsula

**TIME PERIOD:** Jul 13 - Aug 19, 1997

**TIDE STATION USED:** 945-8762 Unavikshak Island, AK.  
Lat. 56° 29.5'N Lon. 157° 44.4'W  
**PLANE OF REFERENCE (MEAN LOWER LOW WATER):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 2.519 meters

**TIDE STATION USED:** 945-8849 Chankluit Island, AK.  
Lat. 56° 08.8'N Lon. 158° 06.4'W  
**PLANE OF REFERENCE (MEAN LOWER LOW WATER):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 2.367 meters

**TIDE STATION USED:** 945-8917 Chignik, Anchorage Bay, AK.  
Lat. 56° 17.8'N Lon. 158° 24.0'W  
**PLANE OF REFERENCE (MEAN LOWER LOW WATER):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 2.486 meters

**TIDE STATION USED:** 945-8945 Chignik Lagoon Main Channel, AK.  
Lat. 56° 19.4'N Lon. 158° 30.9'W  
**PLANE OF REFERENCE (MEAN LOWER LOW WATER):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 2.348 meters

**REMARKS: RECOMMENDED ZONING**  
Use zone(s) identified as: SAP7, SAP8 & SAP9  
Refer to attachments for zoning information.

**Note 1:** Provided time series data are tabulated in metric units (Meters), relative to MLLW and on Greenwich Mean Time.

**Note 2:** Use tide data from the appropriate station for each zone according to the order in which they are listed in the "Tidezone" corrector files. For example, tide station one (TS1) would be the first choice for an applicable zone followed by TS2, etc. when data are not available. All zones within a survey sheet may not have the same order of applicable tide stations.

  
-----  
**CHIEF, OPERATIONAL ANALYSIS BRANCH**

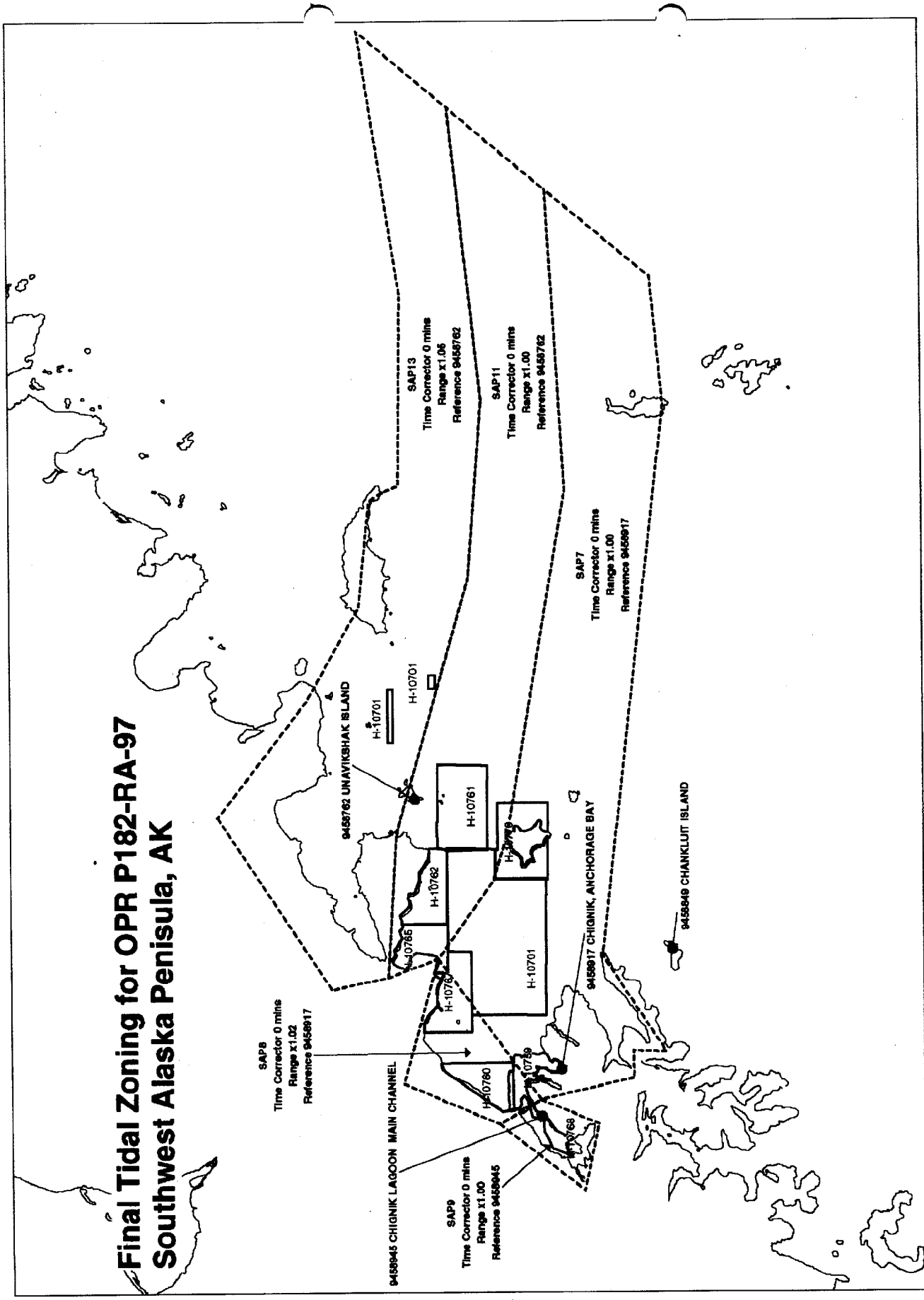


Final tide zone node point locations for OPR P182-RA-97,  
Sheet H-10759.

Format: Longitude in decimal degrees (negative value denotes  
Longitude West),  
Latitude in decimal degrees  
Tide Station (in recommended order of use)  
Average Time Correction (in minutes)  
Range Correction

		Tide Station Order	AVG Time Correction	Range Correction
Zone SAP7				
-158.130628	56.461475	945-8917	0	1.00
-158.474563	56.325022	945-8762	0	0.98
-158.422005	56.199729	945-8849	0	1.05
-158.355785	56.200309			
-158.358075	56.156015			
-158.122839	56.241028			
-156.778131	56.154977			
-156.465239	56.171892			
-156.253456	56.311786			
-156.986771	56.288084			
-157.826885	56.36808			
-157.940076	56.386887			
-158.130628	56.461475			
Zone SAP8				
-158.474563	56.325022	945-8917	0	1.02
-158.130628	56.461475	945-8762	0	1.00
-158.435831	56.508574	945-8849	0	1.08
-158.534417	56.380701			
-158.474563	56.325022			
Zone SAP9				
-158.474563	56.325022	9458945	0	1.00
-158.533537	56.247363			
-158.697254	56.266412			
-158.534417	56.380701			
-158.474563	56.325022			

# Final Tidal Zoning for OPR P182-RA-97 Southwest Alaska Peninsula, AK



SAP 8  
Time Corrector 0 mins  
Range x1.02  
Reference 9458917

SAP 9  
Time Corrector 0 mins  
Range x1.00  
Reference 9458945

SAP 13  
Time Corrector 0 mins  
Range x1.06  
Reference 9458762

SAP 11  
Time Corrector 0 mins  
Range x1.00  
Reference 9458762

SAP 7  
Time Corrector 0 mins  
Range x1.00  
Reference 9458917

9458762 UNAVIKSHAK ISLAND

H-10701

H-10701

H-10761

H-10762

H-10765

H-10768

H-10770

H-10780

H-10789

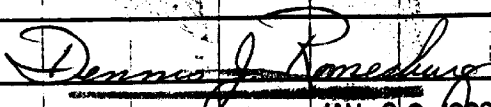
9458917 CHIGNIK, ANCHORAGE BAY

9458949 CHANKLUIT ISLAND

GEOGRAPHIC NAMES

H-10759

Name on Survey	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">A CHART NO. 16566</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">B ON PREVIOUS SURVEY NO.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">C ON U.S. QUADRANGLE MAPS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">D FROM LOCAL INFORMATION</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">E ON LOCAL MAPS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">F P.O. GUIDE OR MAP</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">G RAND McNALLY ATLAS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">H U.S. LIGHT LIST</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">K</div> </div>											
	ALASKA (title)	X										
ALASKA PENINSULA (title)	X											2
ANCHORAGE BAY	X		X									3
BROWNS POINT	X		X									4
CHIGNIK	X		X									5
CHIGNIK BAY	X		X									6
CHIGNIK SPIT			X									7
EAGLE ROCK	X		X									8
MUD BAY	X		X									9
NEGRO HEAD	X		X									10
RABBIT POINT			X									11
-												12
												13
												14
												15
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												17
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												19
												20
												21
												22
												23
												24
												25

  
 Chief Coast Guard JAN 26 1998



**HYDROGRAPHIC SURVEY STATISTICS**

H-10759

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

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

SHORELINE DATA	
SHORELINE MAPS (List):	TP-00911, TP-00913
PHOTOBATHYMETRIC MAPS (List):	NA
NOTES TO THE HYDROGRAPHER (List):	NA
SPECIAL REPORTS (List):	NA
NAUTICAL CHARTS (List):	16566, 8th Edition, August 3, 1996

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				
POSITIONS REVISED				
SOUNDINGS <del>REVISED</del> (Selected)			18,087	
CONTROL STATIONS REVISED				
	TIME-HOURS			
	VERIFICATION	EVALUATION	TOTALS	
PRE-PROCESSING EXAMINATION				
VERIFICATION OF CONTROL				
VERIFICATION OF POSITIONS				
VERIFICATION OF SOUNDINGS				
VERIFICATION OF JUNCTIONS				
APPLICATION OF PHOTOBATHYMETRY				
SHORELINE APPLICATION/VERIFICATION				
COMPILATION OF SMOOTH SHEET	143.0		143.0	
COMPARISON WITH PRIOR SURVEYS AND CHARTS		12.0	12.0	
EVALUATION OF SIDE SCAN SONAR RECORDS				
EVALUATION OF WIRE DRAGS AND SWEEPS				
EVALUATION REPORT		14.0	14.0	
GEOGRAPHIC NAMES				
OTHER*				
*USE OTHER SIDE OF FORM FOR REMARKS	TOTALS	143.0	26.0	169.0

Pre-processing Examination by <b>M. Bigelow</b>	Beginning Date 1/6/98	Ending Date 1/6/98
Verification of Field Data by <b>M. Bigelow, D. Doles, E. Domingo, R. Mayor, I. Almacen</b>	Time (Hours) 143.0	Ending Date 5/5/98
Verification Check by <b>B. Olmstead</b>	Time (Hours) 6	Ending Date 5/26/98
Evaluation and Analysis by <b>I. Almacen</b>	Time (Hours) 26.0	Ending Date 5/7/98
Inspection by <b>B. Olmstead</b>	Time (Hours) 8	Ending Date 5/29/98

## EVALUATION REPORT

H-10759

### A. PROJECT

The hydrographer's report contains a complete discussion of the Project information.

### B. AREA SURVEYED

The survey area is adequately discussed in the hydrographer's report with the following supplemental information.

This survey covers the area of Anchorage Bay including the approaches to Mud Bay and Chignik Lagoon. The coastline is generally consists of scattered off-lying rocks and ledges with patches of rocky and sandy beaches. A heavy concentration of kelp was noted during this survey around the area off Negro Head. The bottom is primarily made up of sand, mud, gravel and pebble.

Of note, there is an 1100-meter overlap with junction survey H-10760. The area from latitude 56/21/30.0N to latitude 56/22/09.0N and from longitude 158/24/30.0W to longitude 158/30/00.0W was additionally surveyed on H-10760. Refer to Section L, Junctions, for additional discussion regarding this situation.

The hydrographer has determined during this survey the Navigable Area Limit Line (NALL) in accordance with the Project Instructions and the "limited" shoreline verification rules adopted by the ship during field survey operations. A page size chartlet of the survey area indicating the limits of supersession is included in this report as Attachment A.

### C. SURVEY VESSELS

The hydrographer's report contains information relating to survey vessels.

### 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), AutoCad (Version 12.0), and MicroStation 95.

Digital data for this survey exists in the standard HPS format, that is a database format using the .dbf extension. In addition, the plot is filed both in the MicroStation drawing format, i.e., dgn (extension); and in the more universally recognized graphics transfer format, .dxf (extension). Copies of these files will be retained at PHB until data forwarded to headquarters has been accepted and approved. Data base records forwarded are in the Internal Data Format (IDF) and are in compliance with specifications in existence at the time of survey processing.

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 Hydrographic Survey Guideline No. 35 and No. 75.

The field sheet parameters have been revised to center the hydrography on the office plot. The data is plotted using a Modified Transverse Mercator projection and are depicted on a single 1:10,000 scale sheet.

#### **E. SONAR EQUIPMENT**

Side Scan Sonar was used on survey H-10759. Refer to the hydrographer's report, section E for operation, set-up and data processing. The hydrographer's discussion of side scan coverage is supplemented as follows:

200% side scan coverage was conducted 0.5 nautical mile east of Negro Head centered at latitude 56/20/45N, longitude 158/25/00W in depths of 5-14 fathoms. Another area of 200% coverage was conducted to the north and south of Chignik Spit. 100% side scan coverage was conducted along a portion of the entrance channel to Chignik Lagoon just north of Rabbit Point.

#### **F. SOUNDING EQUIPMENT**

Sounding equipment has been adequately addressed 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 an actual tide, dynamic draft, and sound velocity. These reducers have been reviewed and are consistent with present NOS specifications.

Predicted tides were used for the reduction of soundings during field processing. Actual tide reduction is derived from Chignik Anchorage Bay, Alaska, gage 945-8917 and Chignik Lagoon Main Channel, Alaska, gage 945-8945. Tide stations at Unavikshak Island and Chankluit Island were listed on the approved tide note but not used for final sounding reduction. Refer to the approved tide note attached to this report concerning recommended tidal zoning.

#### **H. CONTROL STATIONS**

The control stations used during this survey are adequately discussed in the hydrographer's report.

The positions of horizontal control stations used during hydrographic operations are field values based on NAD 83. The geographic positions of all survey data are 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 NAD27 may be plotted on the smooth sheet utilizing the NAD 83 projection by applying the following corrections.

Latitude: -2.804 seconds (-86.725 meters)  
Longitude: 7.339 seconds (126.093 meters)

The year of establishment of control stations originate with the horizontal control records for this survey.

#### **I. HYDROGRAPHIC POSITION CONTROL**

Hydrographic position control is adequately discussed in the hydrographer's report.

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 maximum (HDOP)

allowable limit has not been exceeded during this survey and the quality of data obtained is good. The reference site confirmation test and the daily DGPS performance checks were conducted in the field and found adequate.

NAD 83 is used as the horizontal datum for plotting and position computations.

Information concerning calibrations and system checks can be found in the separates submitted from the field to accompany the hydrographer's report.

#### **J. SHORELINE**

The shoreline manuscripts TP-00911 and TP-00913 originating from Coastal Mapping Program CM-8309 were compiled on NAD 83 and applied to this survey. Shoreline for this survey were digitized using AutoCad from mylar 1:10,000 scale enlargements of 1:20,000 scale Class III registered shoreline manuscripts. The digitized shoreline file and the survey file were merged during MicroStation processing.

The group of rocks shown on the shoreline map in the vicinity of latitude 56/19/57.0N, longitude 158/25/00.0W, was found to be either the offshore limits or high point of the extensive rocky ledge in the area. This feature should be charted as depicted on the smooth sheet.

The rock awash shown on the shoreline map at latitude 56/18/23.0N, longitude 158/24/39.0W, was found to be an extension of the ledge in the area. However, due to its size and location, this feature should be charted as rock awash based on the customary chart compilation practices.

The charted shoreline should be revised based on the latest shoreline map information and the results of the field shoreline verification as depicted on the smooth sheet.

#### **K. CROSSLINES**

Crosslines are discussed in the hydrographer's report.

#### **L. JUNCTIONS**

Survey H-10759 junctions with the following surveys.

<u>Survey</u>	<u>Year</u>	<u>Scale</u>	<u>Area</u>
H-10699	1996	1:10,000	Eastern Limits
H-10760	1997	1:10,000	Northern Limits
H-10768	1997	1:10,000	Western Limits

The junctions with surveys H-10760 and H-10768 are complete. "Joins" notes have been added to the smooth sheet. An 1100-meter junction overlap with H-10760 exists in this area as previously mentioned in section B of this report. Both surveys H-10759 and H-10760 were conducted during the same time frame and using the same equipment. Both data sets should be used to complement each other within the junctional area. Shoal depths and supplemental soundings from H-10760 have been added to the smooth sheet (H-10759) in red as warranted to adequately delineate the bottom configuration.

The junction with survey H-10699 was not formally completed since this survey was previously processed and forwarded for charting. Soundings and depth curves are in

satisfactory agreement, however, additional lines of hydrography should have been ran along the eastern limits of the present survey to accomplish an adequate junction with survey H-10699. An incomplete junction with survey H-10699 exists from latitude 56/19/30N to latitude 56/21/40N, along longitude 158/22/00W. In this area there is a 100-meter holiday between the 1996 and 1997 survey works. An "Adjoins" note has been added to the smooth sheet.

#### **M. COMPARISON WITH PRIOR SURVEYS**

H-2860 (1906) 1:20,000  
H-4389 (1924) 1:20,000

The prior surveys listed above cover the entire area of the present survey. Sounding agreement is satisfactory with the present survey depths generally shoaler by 1-3 fathoms except around the entrance to Anchorage Bay. This is reflected in the 20 and 30 fathoms depth curves located approximately 1.0-1.5 nautical miles northeast of Eagle Rock. The present survey shows these curves shifted seaward several hundred meters since the prior survey. A few soundings from this survey area appears to be deeper by as much as 2.0 fathoms than the prior surveys. One notable area depicting this situation is located 0.5 nautical mile northwest of Eagle Rock where the 10 fathoms curve has shifted shoreward several hundred meters since 1906-1924. All depths originating from these prior hydrography were adequately addressed during survey operations. A more complete and thorough coverage of the area has been undertaken on this recent survey revealing several shoaler depths and better definition of shoal areas.

Aside from the results of the natural shifting of the seafloor, the other changes noted during this survey may be attributed to greater sounding coverage, improved positioning and sounding methods including the application of modern data acquisition techniques.

The existence of the charted rock originating from survey H-2860 (1906) located at latitude 56/17/57.5N, longitude 158/22/58.0W, was not verified nor discussed in the hydrographer's report. This feature has been transferred to the smooth sheet from the prior survey and should be retained as charted.

With the exception of the item mentioned above, H-10759 is adequate to supersede the prior surveys within the common area of coverage.

#### **N. ITEM INVESTIGATIONS**

AWOIS items #52298, #52344, #52345 and #52346 were assigned to this survey. AWOIS Item #52346 was adequately addressed in the DR, however, these other items were deficient. The DR nor the raw data contained any information on what was being investigated, what was required for the investigation, and how the items were investigated. The hydrographer found cultural features like those described in the AWOIS item descriptions, and assumed they were the same ones even though their geographic positions were different. As a result, the hydrographer did not do an investigation at the charted (original) location, but instead, just obtained positions on the features found. In this case, these items included pier ruins and dolphins. Since it is not uncommon for such features to be rebuilt in a new location after falling into disrepair, their reported positions should have been investigated for possible remains. The hydrographer should follow the requirements specified for AWOIS investigations and reports as described in the Field Procedures Manual.

During office processing, PHB personnel were able to resolve the status of AWOIS items #52298, #52344, and #52345 by contacting the Regulatory Branch, U.S. Army Corps of Engineers, Alaska District office and Mr. Thomas Simpson (907) 749-2210, Manager for the Chignik Pride Pier the past 15 years.

(a) AWOIS Item #52298 is a reported dolphin (PA) charted at latitude 56/17/51.0 N, longitude 158/23/15.8W. This dolphin per Mr. Thomas Simpson is the same one found ENE of the L-shaped pier at latitude 56/17/53.3N, longitude 158/23/11.9W. Delete charted Dol (PA) and chart dolphin as shown on the smooth sheet.

(b) AWOIS Item #52344 is a reported dolphin (PA) charted at latitude 56/17/50.0N, longitude 158/23/20.0W and about 15.0 meters from the SW end of the pier. This charted feature per Mr. Thomas Simpson is the same one found flush to the SW end of the pier extension at latitude 56/17/52.1N, longitude 158/23/15.1W. Delete charted Dol (PA). Charted pier prevents depiction of the dolphin on chart.

(c) AWOIS Item #52345 is a pier ruins charted at latitude 56/17/50.0N, longitude 158/23/18.0W. These pier ruins were not mentioned in the hydrographer's report or investigated during survey operations, however, these features were no longer depicted on the latest shoreline maps compiled in 1990 based on the 1987 NOS photography. According to Mr. Simpson these charted ruins are actually the L-shaped pier which was built in a slightly different location from the project plans and modified since the original plan. The Dols (PA), AWOIS items 52298 and 52344 are associated with the Chignik Pride pier and not with the pier ruins as currently charted. See discussions above. Delete charted pier ruins (AWOIS #52345).

## O. COMPARISON WITH CHART

Survey H-10759 was compared with the following charts.

<u>Chart</u>	<u>Edition</u>	<u>Date</u>	<u>Scale</u>	<u>Datum</u>
16566	8th	Aug. 3, 1996	1:77,477	NAD83
16566	9th	March 7, 1998	1:77,477	NAD83

### a. Hydrography

Charted hydrography originates with the previously discussed prior surveys and miscellaneous source data. The prior surveys have been adequately addressed in section M and require no further discussion. Comparison was also made with the 9th edition of the chart and no changes were noted between editions within the common area of the survey.

The presently charted anchorage at latitude 56/17/57.5N, longitude 158/23/35.0W, was not mentioned in the hydrographer's report. Based on this survey, this area has not changed and still considered suitable for anchorage. It is recommended that the symbol be retained as charted.

Except for the items mentioned above and in the preceding section of this report, survey H-10759 is adequate to supersede charted hydrography within the common area.

### b. Dangers to navigation

One (1) danger to navigation was discovered during this survey and reported to the USCG, NIMA, N/CG261 and N/CS34 on August 28, 1997. Two (2) additional dangers were identified during office processing and were reported to the USCG for inclusion to the Local Notice to Mariners. A copy of both reports are attached.

## **P. ADEQUACY OF SURVEY**

With the exception of the deficiencies mentioned in the preceding sections of this report, hydrography contained on survey H-10759 is adequate to:

- a. delineate the bottom configuration, determine least depths, and draw the required 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 Procedures Manual, April 1994 Edition with the following exceptions.

(a) The ship's submission of survey data for H-10759 exceeded the required four weeks from completion of field work as specified in the Field Procedures Manual. No written explanation from the Chief of Party was received by the Chief of processing section concerning the delay. Survey H-10759 was completed August 19, 1997 and was transmitted for office processing on December 8, 1997.

(b) An adequate junction was not effected with survey H-10699. Refer to Section L, Junctions, for specific information regarding this matter.

(c) Refer to Section N, Item Investigation, regarding AWOIS investigations.

## **Q. AIDS TO NAVIGATION**

Chignik Spit Light is the only fixed aid to navigation found within the survey area. A good position check of the light using GPS was accomplished during this survey. This aid was found to be in good condition and adequately serves its intended purpose. See section Q, Descriptive Report Insert, for specific information.

Three (3) privately maintained mooring buoys situated inside Anchorage Bay were located during survey operations and have been shown on the smooth sheet. See section J of the hydrographer's report for the geographic positions of these buoys.

There were no features of landmark value located within the area of this survey.

## **R. STATISTICS**

Statistics are itemized in the hydrographer's report.

## **S. MISCELLANEOUS**

Miscellaneous information is discussed in the hydrographer's report.

The extensive junctional data from H-10760 should have been incorporated into the data set with H-10759. This would have resulted in a more traditional junction and better bottom configuration on the smooth sheet.

**T. RECOMMENDATIONS**

This is an adequate hydrographic survey. Additional work to complete the junctional holiday specified in section P of this report should be conducted on a low priority basis.

**U. REFERRAL TO REPORTS**


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



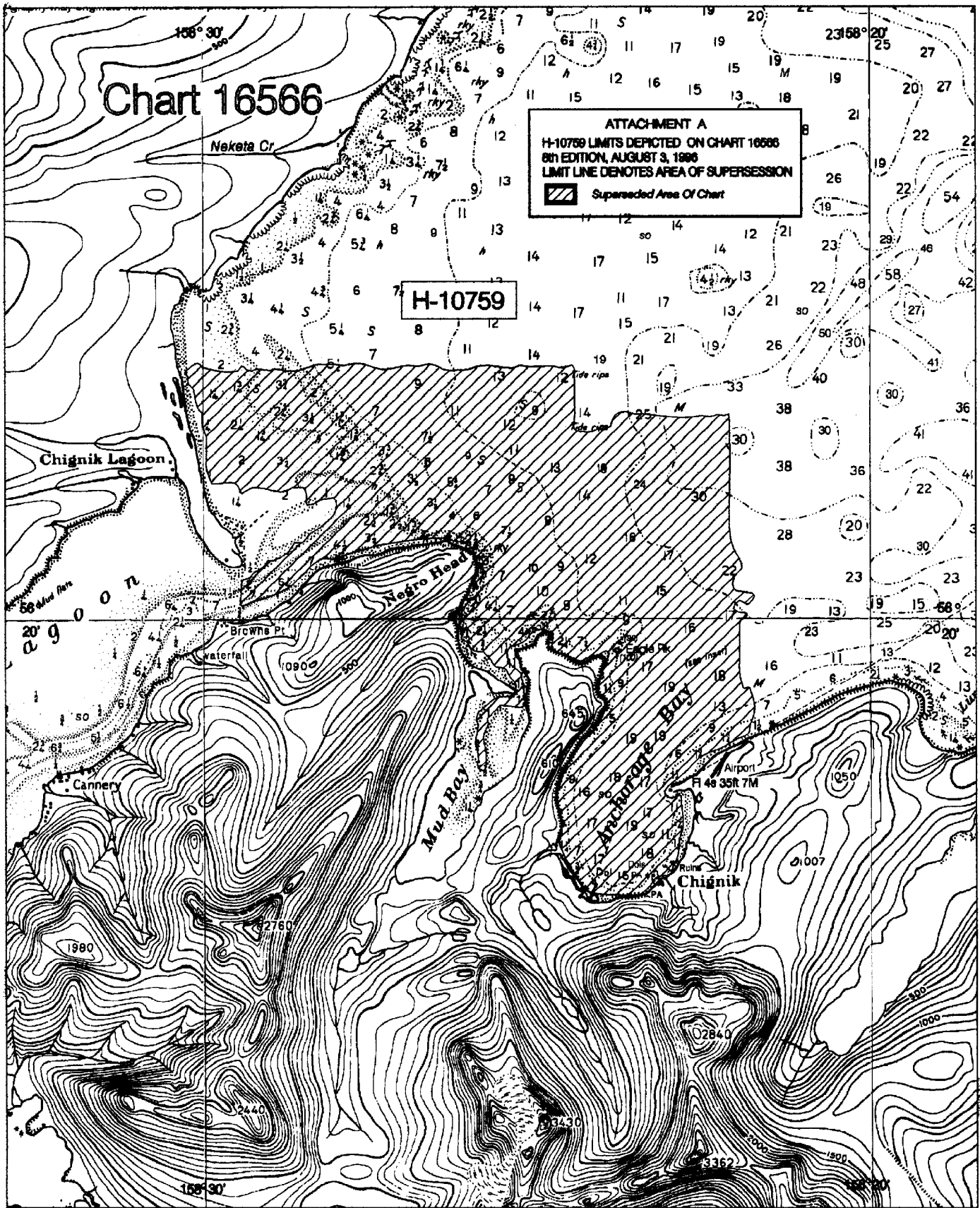
Isagani A. Almacén  
Cartographer



# Chart 16566

**ATTACHMENT A**  
H-10759 LIMITS DEPICTED ON CHART 16566  
6th EDITION, AUGUST 3, 1986  
LIMIT LINE DENOTES AREA OF SUPERSESSION  
 Superseded Area Of Chart

**H-10759**



APPROVAL SHEET  
H-10759

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 survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Bruce A. Olmstead Date: 6/10/98  
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: 6/26/98  
Kathy Timmons  
Commander, NOAA  
Chief, Pacific Hydrographic Branch

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Final Approval

Approved:

Andrew A. Armstrong III Date: August 17, 1998  
Andrew A. Armstrong III  
Captain, NOAA  
Chief, Hydrographic Surveys Division

MARINE CHART BRANCH  
**RECORD OF APPLICATION TO CHARTS**

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10759

**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
16566 (circled)	5/15/98	<i>[Signature]</i>	Full Part Before After Marine Center Approval Signed Via Drawing No. Full application of Features and Soundings from smooth sheet
16566	6/24/98	<i>[Signature]</i>	Full Part Before After Marine Center Approval Signed Via Drawing No. Full application of Features and Soundings from smooth sheet and three inset of chart 16566.
16566	9/8/98	MATT Kroll	Full Part Before After Marine Center Approval Signed Via applied sands, curves Drawing No. and features to chart thru RP 165680, 81 (Main & Inset) RW 10/16/98 TWA
16613	9/8/98	MATT Kroll	Full Part Before After Marine Center Approval Signed Via applied sands, curves Drawing No. and features to chart thru RP 165680, 81 RW 10/16/98 TWA
16011	9/8/98	MATT Kroll	Full Part Before After Marine Center Approval Signed Via Exam No corr Drawing No. RW 10/16/98 TWA
16006	9/8/98	MATT Kroll	Exam No corr Full Part Before After Marine Center Approval Signed Via RW 10/24/98 TWA
500	9/8/98	MATT Kroll	Exam No corr Drawing No. RW 10/24/98 TWA
530	9/8/98	MATT Kroll	Full Part Before After Marine Center Approval Signed Via Exam No corr Drawing No. RW 10/24/98 TWA
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
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