

H11004

NOAA FORM 76-35A

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

## DESCRIPTIVE REPORT

*Type of Survey* Hydrographic

*Field No.* RA-10-09-00

*Registry No.* H-11004

### LOCALITY

*State* Alaska

*General Locality* Southwest Prince William Sound  
Western Coast of Montague Island - 7

*Sublocality* Miles Northeast of Hanning Bay

2000

### CHIEF OF PARTY

Commander Daniel R. Herlihy, NOAA

### LIBRARY & ARCHIVES

DATE

**HYDROGRAPHIC TITLE SHEET****H-11004**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-10-09-00**State AlaskaGeneral Locality Southwest Prince William SoundSublocality West Coast of Montague Island - 7 Miles Northeast of Hanning BayScale 1:10,000Date of Survey 9/14/00 - 10/12/00Instructions Dated Aug. 25, 2000Project No. OPR-P139-RAVessel RA-2(2122), RA-3(2123), RA-4(2124), RA-5(2125), and RA-6(2126)Chief of Party Commander D. R. Herlihy, NOAASurveyed by Ship personnel and physical scientists from Pacific Hydrographic BranchSoundings taken by echo sounder, hand lead, pole SB 1180, RESON 8101, Knudsen 320Graphic record scaled by RAINIER PersonnelGraphic record checked by RAINIER PersonnelEvaluation by L. Deodato Automated plot by HP DesignJet 1050CVerification by E. Domingo, R. Davies, R. MayorSoundings in Fathoms at MLLWREMARKS: Time in UTC.**Revisions and annotations appearing as endnotes were generated****during office processing..****All depths listed in this report are referenced to****mean lower low water unless otherwise noted.**

Accomplished	September	October
LNМ Singlebeam	356.73	287.78
LNМ Multibeam	1095.14	1797.52
SQ NM Singlebeam	14.23	1.15
SQ NM Multibeam	72.62	100.55
Total SQ NM	86.85	101.7
SV Casts	71	141
Bottom Samples	0	166
AWOIS Invest.	2	15
Tide gauges	4	0
Control station	0	0
Down time (hr)	11	7.5
Days at Sea	16	27

Sheet AQ  
H11000

Sheet AT  
H11002

Sheet AS  
H11001

Sheet AU  
H11003

Sheet AV  
H11004

Sheet AW  
H11005

Sheet AX  
H11006

Sheet BE  
H11013

Sheet BA  
H11012

Sheet BF  
H11017

Sheet AY  
H11007

### Progress Sketch

OPR-P139-RA  
Prince William Sound  
ALASKA

October 2000

Chart 16701

NOAA Ship RAINIER  
CDR D. R. Herlthy  
Commanding

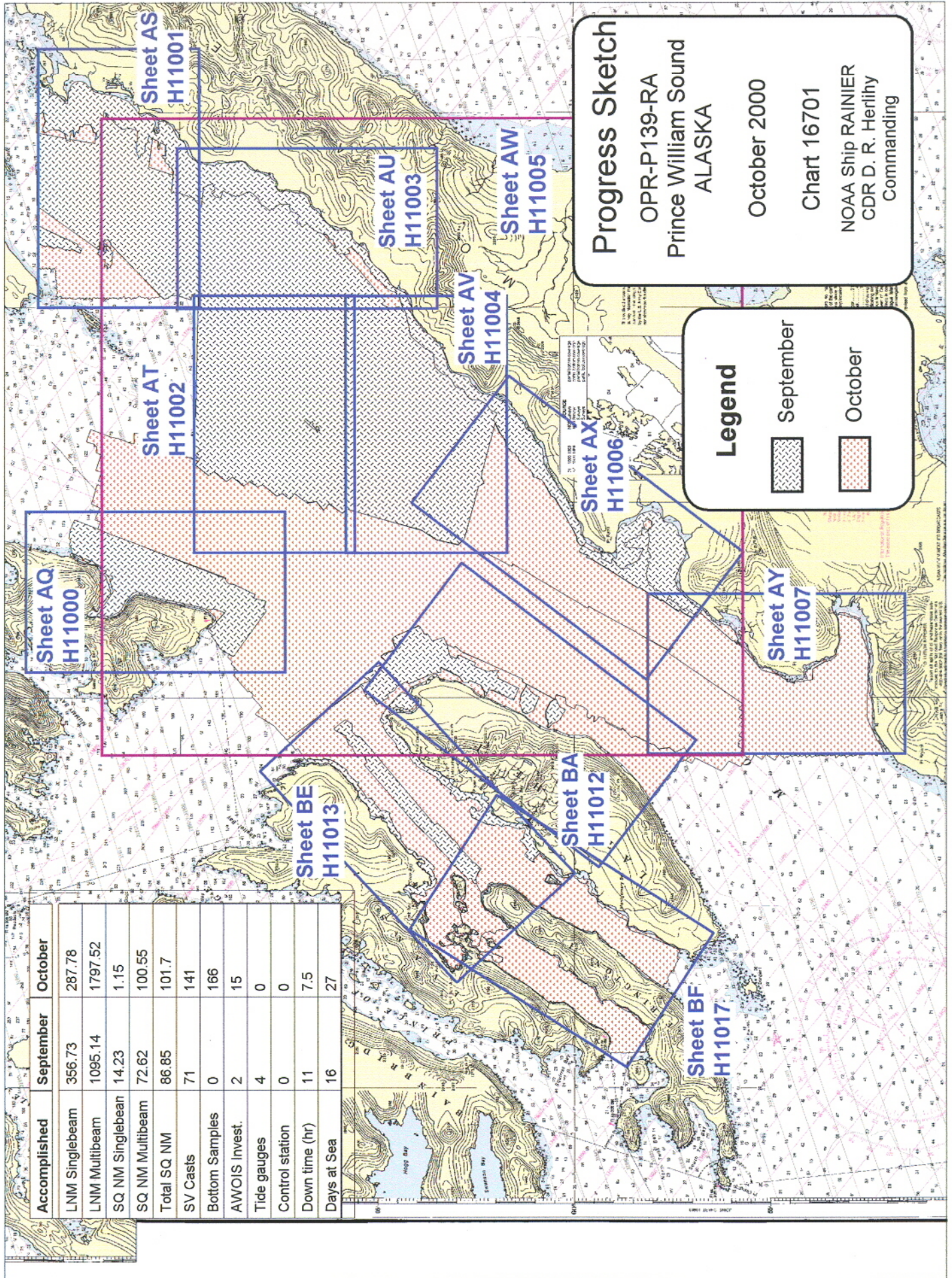
### Legend

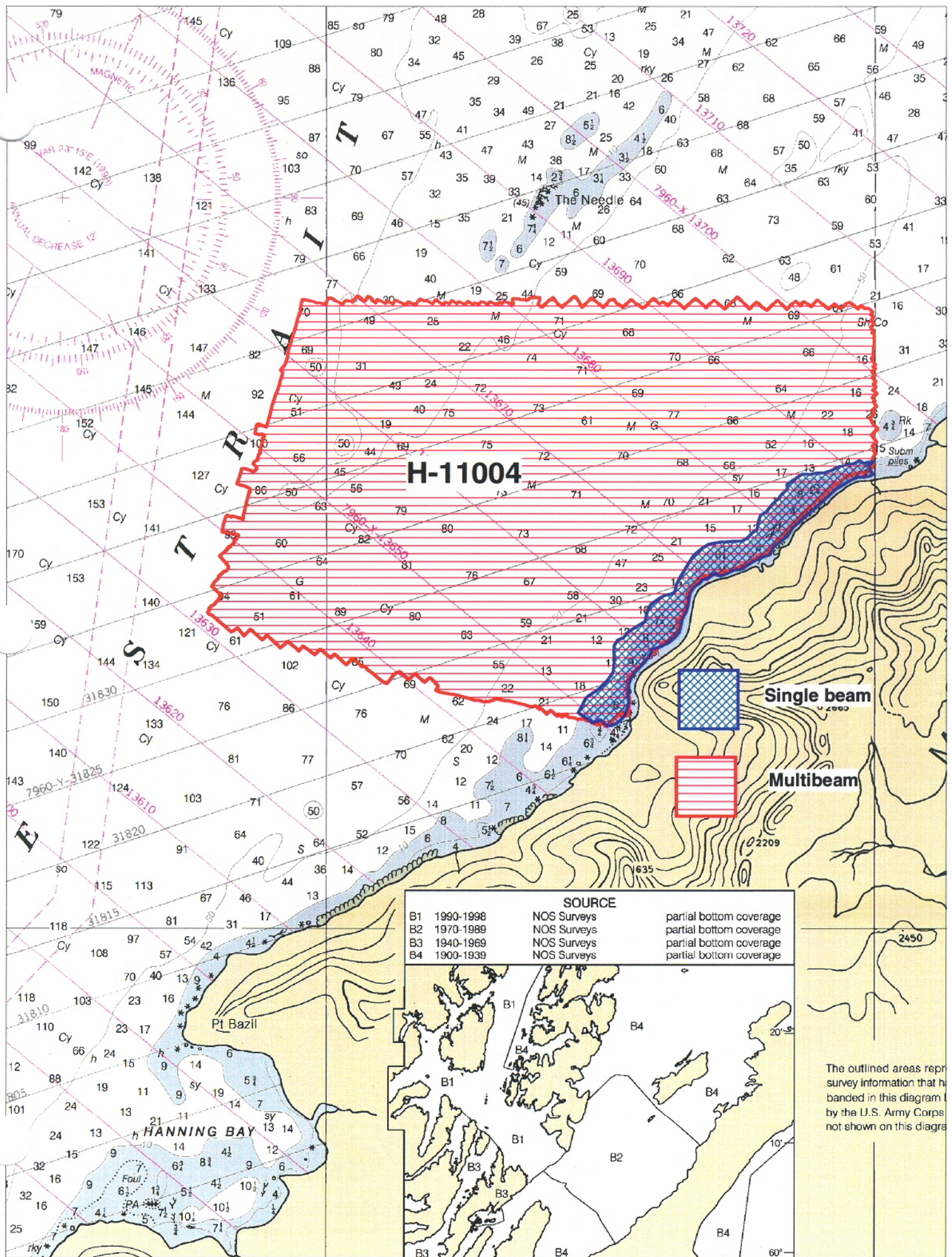


September



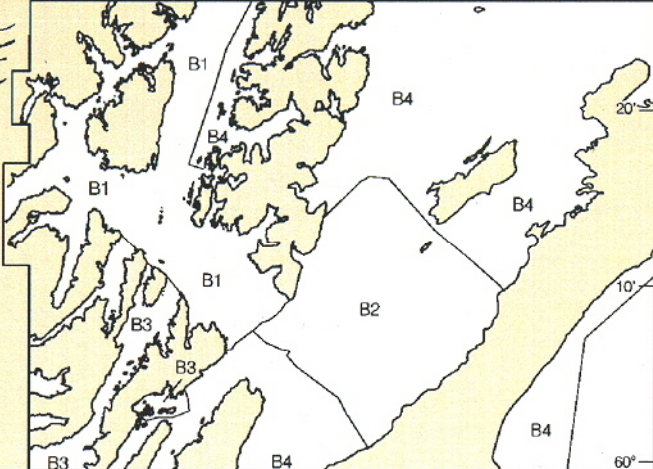
October





SOURCE		
B1	1990-1998	NOS Surveys
B2	1970-1989	NOS Surveys
B3	1940-1969	NOS Surveys
B4	1900-1939	NOS Surveys

partial bottom coverage  
 partial bottom coverage  
 partial bottom coverage  
 partial bottom coverage



The outlined areas represent survey information that has been banded in this diagram by the U.S. Army Corps of Engineers. Areas not shown on this diagram.

# Descriptive Report to Accompany Hydrographic Survey H11004

Project OPR-P139-RA-00<sup>1</sup> Southwest Prince William Sound

Scale 1:10,000

September-October 2000

**NOAA Ship RAINIER**

Chief of Party: Commander Daniel R. Herlihy, NOAA

## A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-P139-RA-00<sup>2</sup>, dated August 25, 2000, and the Draft Standing Project Instructions dated April 6, 1998. This project responds to requests from the National Imagery and Mapping Agency (NIMA), the U.S. Coast Guard, the Southwest Alaska Pilot's Association, cruise ship lines, and local fishermen to provide updated charts for the southwest Prince William Sound area. Marine traffic throughout this area consists of commercial fishing vessels, fishing charter boats, Alaska Marine Highway ferries, and barge traffic.

The survey area is located on the western coast of Montague Island. The survey's northern limit is latitude 60°05'50"N<sup>3</sup> and the southern limit is latitude 60°01'45"N<sup>4</sup>. The survey's western limit is longitude 147°42'17"W<sup>5</sup> and the eastern limit is longitude 147°29'54"W<sup>6</sup>.

Data acquisition was conducted from September 14 to October 12, 2000 (DN 258 to 286).

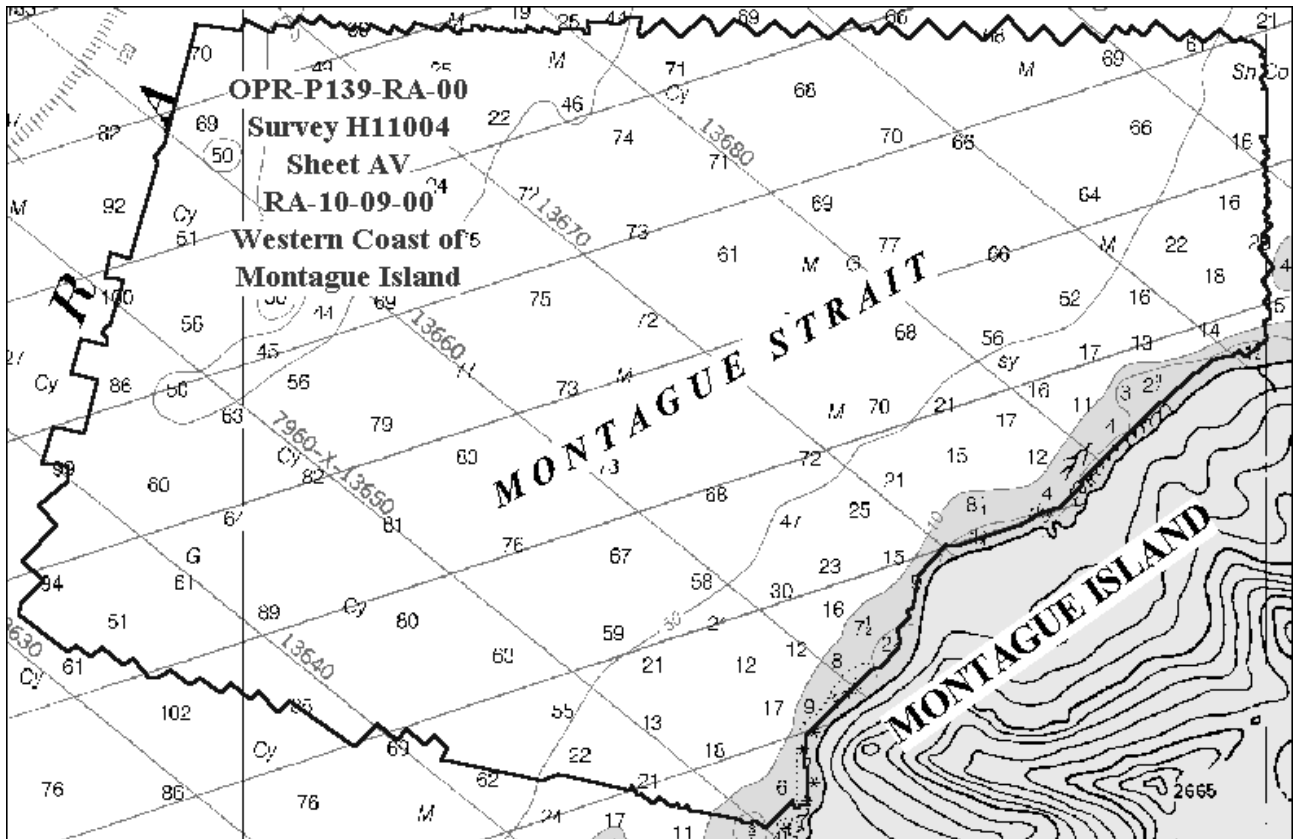


Figure 1. H11004 Survey Limits.

## B. DATA ACQUISITION AND PROCESSING

A complete description of data acquisition and processing systems, survey vessels, quality control procedures, and data processing methods, can be found in the *OPR-P139-RA-00 Data Acquisition and Processing Report* submitted under separate cover. Items specific to this survey and any deviations from the aforementioned report are discussed in the following sections.

### B1. Equipment and Vessels

Data were acquired by RAINIER's survey launches (vessel numbers 2122, 2123, 2124, 2125, and 2126). Vessels 2123, 2124 and 2126 were used to acquire shallow-water multibeam (SWMB) soundings and sound velocity profiles. Vessels 2122 and 2125 were used to acquire vertical-beam echo soundings (VBES) and detached positions (DPs) for shoreline verification. Vessel 2125 was also used to collect bottom samples. No unusual vessel configurations or problems were encountered during this survey.

### B2. Quality Control

#### Crosslines

Vertical Beam Echo Sounder (VBES) crosslines totaled 3.4 nautical miles, comprising 23.1% of mainscheme hydrography. Crosslines generally agreed within 1 meter of mainscheme hydrography.

Shallow-Water Multibeam (SWMB) crosslines totaled 21.86 nautical miles, comprising 8.71% of SWMB hydrography. The Quality Control Report (CARIS HIPS) for the checkline file averaged 94.70655%, with a depth tolerance factor of 0.013 which conforms to International Hydrographic Organization Order 1 specifications detailed in Special Publication S-44, Edition 4, as well as NOS Hydrographic Surveys Specifications and Deliverables Manual. See Appendix V<sup>7</sup> for the detailed report.

#### Junctions<sup>8</sup>

The following contemporary surveys junction with H11004:

<b>Registry #</b>	<b>Scale</b>	<b>Date</b>	<b>Junction side</b>
H11002	1:10,000	2000	North
H11003	1:10,000	2000	Northeast
H11005	1:40,000	2000	West
H11006	1:10,000	2000	Southwest

Surveys H11003, H11005, and H11006 junction well with this survey, with differences generally less than one fathom. Processing on survey H11002 was not complete at the time of this report. A comparison with this survey will be discussed in the H11002 Descriptive Report.

Final comparisons will be made at the Pacific Hydrographic Branch (PHB) after the application of smooth tides.<sup>9</sup>

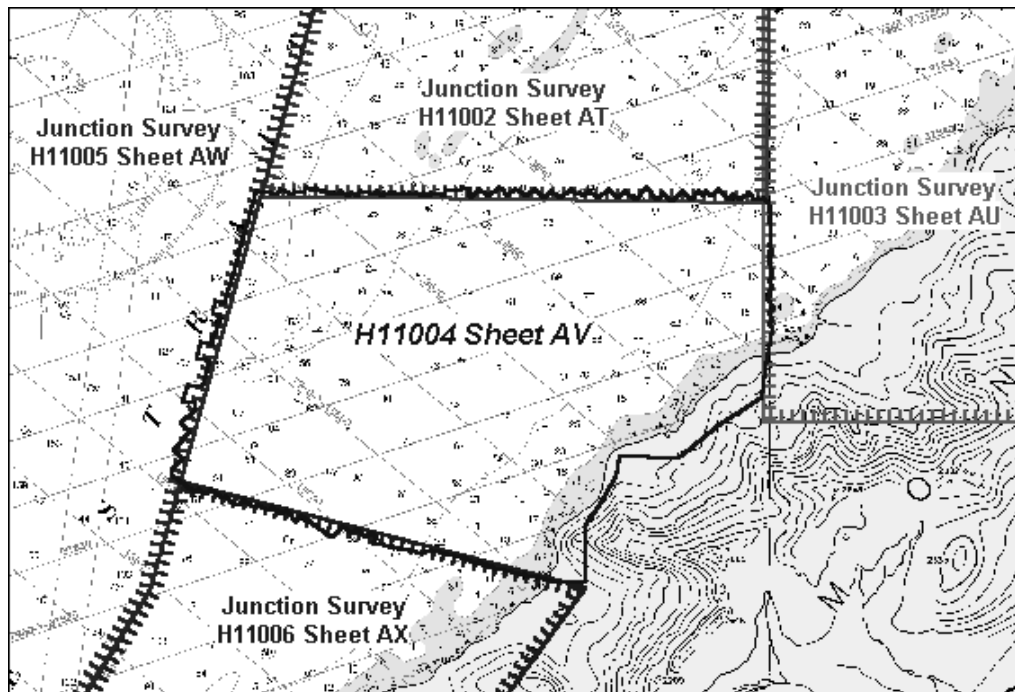


Figure 2. H11004 Junction Surveys.

### Data Quality Factors

No unusual conditions were encountered during the survey which affected the expected accuracy and quality of survey data.

### B3. Data Reduction

Data reduction procedures for survey H11004 conform to those detailed in the *OPR-P139-RA-00 Data Acquisition and Processing Report*.

## C. VERTICAL AND HORIZONTAL CONTROL

A complete description of vertical and horizontal control for survey H11004 can be found in the *OPR-P139-RA-00 Horizontal and Vertical Control Report* submitted under separate cover. A summary of horizontal and vertical control for this survey follows.

### Horizontal Control

The horizontal datum for this project is the North American Datum of 1983 (NAD83). Differential GPS (DGPS) was the sole method of positioning. Differential corrections from U.S. Coast Guard beacons at Potato Point, AK (ID #895), and Cape Hinchinbrook, AK (ID #894), were utilized during this survey. Launch-to-launch DGPS performance checks were performed weekly in accordance with Section 3.2 of the FPM. Copies of the performance checks are included in the *OPR-P139-RA-00 Horizontal and Vertical Control Report*.

## Vertical Control

The vertical datum for this project is Mean Lower-Low Water (MLLW). The operating National Water Level Observation Network (NWLON) primary tide station at Cordova, AK (945-4050) and Valdez, AK (945-4240) will serve as control for datum determination. RAINIER personnel installed Sutron 8200 “bubbler” tide gauges at the following subordinate stations in accordance with Project Instructions:

Station Name	Station Number	Type of Gauge	Date of Installation	Date of Removal
Perch Point	945-4561	30-day	12 September 2000	26 October 2000
Latouche	945-4713	30-day	12 September 2000	27 October 2000
Point Elrington	945-4814	30-day	25 September 2000	25 October 2000

Heavy surf and foul shoreline precluded the installation of a new station in San Juan Bay, Montague Island, as required by the Letter Instructions. After consultation with N/CS31 and N/OPS1, the following historical station was reoccupied in lieu of a new station at San Juan Bay:

Station Name	Station Number	Type of Gauge	Date of Installation	Date of Removal
MacLeod Harbor	945-4674	30-day	21 September 2000	27 October 2000

Raw water level data from these gauges was forwarded to N/OPS1 throughout the project period, with the final package submitted in November, 2000 in accordance with HSG 50 and FPM 4.7. The Pacific Hydrographic Branch will apply final approved (smooth) tides to the survey data during final processing. A request for delivery of final approved (smooth) tides for survey H11004 was forwarded to N/OPS1 on October 30, 2000 in accordance with FPM 4.8.<sup>10</sup>

## D. RESULTS AND RECOMMENDATIONS<sup>11</sup>

### D.1 Automated Wreck and Obstruction Information System (AWOIS) Investigations

There were no AWOIS items assigned to this survey.<sup>12</sup>

### D.2 Chart Comparison

Survey H11004 was compared with chart 16701 (17<sup>th</sup> Ed.; July 25, 1998, 1:81,436)<sup>13</sup> and chart 16702 (10<sup>th</sup> Ed.; June 13, 1998, 1:40,000).<sup>14</sup>

Depths from charts<sup>15</sup> 16701 and 16702<sup>16</sup> adequately agree with the current survey, although soundings from H11004 are consistently shoaler than the charted soundings by one to five fathoms. In areas where dramatic discrepancies were noted, these are most likely the result of several factors including improved technology used in the current survey (including the use of multibeam), the overall nature of the extremely varied underwater terrain found throughout the survey area, and the impact of the major earthquake of March 27, 1964.<sup>17</sup>

Notable differences are addressed below. All of the items discussed were covered with 100% shallow-water multibeam. The following comparisons address items not otherwise submitted as dangers to navigation (refer to section D.4):



In the vicinity of a charted (16701) 22-fathom sounding, the present survey revealed a <sup>18</sup> depth of 15.8 fathoms (Pos. #587485) at 60°04'40.424"N, 147°30'44.725"W (471485.6 E, 6660196.8 N).

In the vicinity of a charted (16701 and 16700) 31-fathom sounding, the present survey revealed a <sup>19</sup> depth of 24 fathoms (Pos. #103997) at 60°05'09.898"N, 147°39'14.581"W (463613.8 E, 6661178.1 N).

In the vicinity of a charted (16701) 40-fathom sounding, the present survey revealed a <sup>20</sup> depth of 27<sup>21</sup> fathoms (Pos. #135067) at 60°04'50.118"N, 147°38'14.224"W (464540.6 E, 6660557.1 N)<sup>22</sup>.

In the vicinity of a charted (16701) 44-fathom sounding, the present survey revealed a <sup>23</sup> depth<sup>24</sup> of 33<sup>25</sup> fathoms (Pos. #126784)<sup>26</sup> at 60°04'23.757"N<sup>27</sup>, 147°39'12.368"W<sup>28</sup> (463633.9 E, 6659750.4 N)<sup>29</sup>.

In the vicinity of a charted (16701) 46-fathom sounding, the present survey revealed a <sup>30</sup> depth<sup>31</sup> of 39<sup>32</sup> fathoms (Pos. #498801)<sup>33</sup> at 60°05'25.342"N<sup>34</sup>, 147°36'47.014"W (465898.6 E, 6661634.0 N)<sup>35</sup>.

In the vicinity of a charted (16701) 47-fathom sounding, the present survey revealed a <sup>36</sup> depth of 30 fathoms (Pos. #559299) at 60°03'18.695"N, 147°34'39.222"W (467838.9 E, 6657698.4 N).

In the vicinity of a charted (16701) 49-fathom sounding, the present survey revealed a <sup>37</sup> depth of 38 fathoms (Pos. #213047) at 60°05'33.125"N, 147°39'10.466"W (463684.5 E, 6661896.0 N).

In the vicinity of a charted (16701 and 16700) 51-fathom sounding, the present survey revealed a <sup>38</sup> depth of 38 fathoms (Pos. #267120) at 60°02'48.623"N, 147°41'16.301"W (461687.4 E, 6656826.9 N).

In the vicinity of a charted (16701 and 16700) 60-fathom sounding, the present survey revealed a <sup>39</sup> depth<sup>40</sup> of 51<sup>41</sup> fathoms (Pos. #240493) at 60°03'33.992"N, 147°40'48.969"W (462124.7 E, 6658226.0 N).

In the vicinity of a charted (16701) 61-fathom sounding, the present survey revealed a depth of 50 fathoms (Pos. #265858) at 60°03'01.678"N, 147°40'44.012"W (462191.1 E, 6657225.6 N).<sup>42</sup>

In the vicinity of a charted (16701) 63-fathom sounding, the present survey revealed a depth of 50 fathoms (Pos. #218238) at 60°03'52.861"N, 147°40'09.617"W (462739.2 E, 6658803.5 N).<sup>43</sup>

In the vicinity of a charted (16701) 69-fathom sounding, the present survey revealed a depth of 51 fathoms (Pos. #172209) at 60°04'25.583"N, 147°38'40.732"W (464123.5 E, 6659802.1 N).<sup>44</sup>

In the vicinity of a charted (16701 and 16700) 77-fathom sounding, the present survey revealed a depth of 67<sup>45</sup> fathoms (Pos. #386653) at 60°04'41.431"N, 147°33'39.660"W (468781.9 E, 6660249.9 N).

Final sounding comparisons will be made at the Pacific Hydrographic Branch after the application of smooth tides.<sup>46</sup>

### **D.3 Shoreline**

#### **Method of Shoreline Verification**

N/NGS3 supplied photogrammetric shoreline data in raster format for T-12671 for use as source shoreline. The T-sheet raster images were registered and digitized in MapInfo by RAINIER personnel and the resultant vector data were used in Hypack for field verification. In addition, features shown on the current editions of charts 16701 and 16700 were digitized in MapInfo by RAINIER personnel and displayed in Hypack for field verification.

Shoreline verification was conducted near predicted low water in accordance with the Project Instructions and FPM 6.1 and 6.2. For this survey the general limit of safe navigation of a survey launch was five to twenty meters offshore of the apparent low-water line. Water depths along this limit of safe navigation were approximately four meters at Mean Lower-Low Water (MLLW). Features unreachable by survey launch are depicted on the Detached Position and Bottom Sample Plot<sup>47</sup> as the Hydrographer's approximate representation of the shoreline.

Detached positions (DPs) taken during shoreline verification were recorded in Hypack and on DP forms, and processed in HPS. These indicate revisions to features, and features not found on the T-Sheet or chart. In addition, annotations describing shoreline were recorded on hard copy plots of digitized shoreline. DP forms are included in Section I of the *Separates to be Included with Survey Data*.

A detailed Detached Position and Bottom Sample plot, in both paper copy and MapInfo format, is provided showing all detached positions and bottom samples with notes relating to each feature. The updated shoreline and features are also depicted on the final sounding plot.

The features found during this survey generally matched those of the source and charted shoreline. Changes and new features were found and are depicted on the final Detached Position plot.<sup>48</sup> A few items of significance are addressed below.

### **Source Shoreline Changes and New Features**

A new rock<sup>49</sup> (Pos. #20321) was found at 60°02'11.046"N, 147°34'30.462"W (467956.2 E, 6655604.5 N).

### **Charted Features**

The charted (16701) rock at 60°02'13.853"N, 147°34'31.654"W (467938.5 E, 6655691.5 N) was disproved after conducting a 5-minute visual search. Water visibility in this area was clear to the bottom with a depth of 4.0 meters (Pos. #20320). The Hydrographer believes this charted rock represents the seaward extent of the T-sheet ledge located inshore of this position.<sup>50</sup>

Additionally, two T-sheet / charted rocks depicted northeast of this position (60°02'19.28"N, 147°34'23.99"W; and 60°02'23.34"N, 147°34'16.15"W) were found to be the seaward extents of the T-sheet ledge.<sup>51</sup> Two rocks to the southeast of this position (60°02'03.87"N, 147°34'23.7"W; and 60°01'57.44"N, 147°34'25.71"W) were similarly found to be the seaward extents of ledges. Detached positions were not taken in these instances as the positions of the T-sheet rocks matched identically with the extents of the ledges when verified in the field. The extents of the ledge have been revised to correspond with these positions. The Hydrographer recommends charting the T-sheet ledges and removing the charted rocks.<sup>52</sup>

### **Recommendations**

The Hydrographer recommends that the shoreline as depicted on the Detached Position and Bottom Sample plot and final sounding plot supersede and complement shoreline information compiled on the T-sheet and chart as noted.<sup>53</sup> These revisions are recorded in the MapInfo digital files named "H11004\_Shoreline" and "H11004\_ShorelineUpdates". In addition, field notes made by the Hydrographer, including verification of source features and descriptions of shoreline classification, are submitted in the digital MapInfo file "H11004\_ShorelineNotes."

#### **D.4 Dangers to Navigation**

Eleven dangers to navigation were found and reported to the Pacific Hydrographic Branch for verification and final submission to the Seventeenth Coast Guard District on December 18, 2000. A copy of the preliminary Danger to Navigation Report is included in Appendix I.<sup>54</sup> A copy of the final report will be inserted by PHB following verification and submission to the U.S Coast Guard.<sup>55</sup>

#### **D.5 Aids to Navigation**

No aids to navigation were within the H11004 survey limits.<sup>56</sup>

**E. APPROVAL**

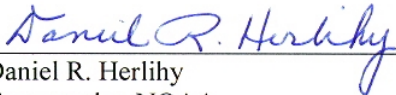
As Chief of Party, I have ensured that standard field surveying and processing procedures were followed in producing this examination in accordance with the Hydrographic Manual, Fourth Edition; the Hydrographic Survey Guidelines; the Field Procedures Manual, and the NOS Hydrographic Surveys Specifications and Deliverables, as updated for 2000.

The digital data and supporting records have been reviewed by me, are considered complete and adequate for charting purposes, and are approved. All records are forwarded for final review and processing to N/CS34, Pacific Hydrographic Branch


Survey H11004 is complete and adequate to supersede charted soundings in their common areas. No additional work is required for this survey.<sup>57</sup>

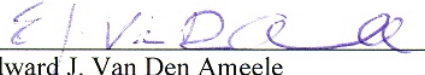
Listed below are supplemental reports submitted separately which contain additional information relevant to this survey:

<u>Title</u>	<u>Date Sent</u>	<u>Office</u>
Data Acquisition and Processing Report for OPR-P139-RA-00	25 November, 2000	N/CS34
Horizontal and Vertical Control Report for OPR-P139-RA-00	TBD	N/CS34
Tides and Water Levels Package for OPR-P139-RA-00	27 November, 2000	N/OPS1
Coast Pilot Report for OPR-P139-RA-00	TBD	N/CS26

Approved and Forwarded:   
 Daniel R. Herlihy  
 Commander, NOAA  
 Commanding Officer

In addition, the following individuals were also responsible for overseeing data acquisition and processing of this survey:

Survey Sheet Manager:   
 Daniel K. Karlson  
 Lieutenant (junior grade), NOAA

Field Operations Officer:   
 Edward J. Van Den Ameerle  
 Lieutenant, NOAA

## Revisions Compiled During Office Processing and Certification

<sup>1</sup> PHB Revision -- Strikethrough ~~00~~

<sup>2</sup> PHB Revision -- Strikethrough ~~00~~

<sup>3</sup> PHB Revision -- Revise GP to 60°05'46"N

<sup>4</sup> PHB Revision -- Revise GP to 60°01'51"N

<sup>5</sup> PHB Revision -- Revise GP to 147°42'15"W

<sup>6</sup> PHB Revision -- Revise GP to 147°30'00"W and the west coast of Montague Island.

<sup>7</sup> Filed with the hydrographic data

<sup>8</sup> The junctions with surveys H11002, H11003, H11005, and H11006 are complete. A "Joins" note has been added to the smooth sheet where applicable. A few soundings from the junctional surveys have been transferred within the common areas of H11004 to better delineate the bottom configuration.

<sup>9</sup> Concur

<sup>10</sup> Approved tide note dated February 13, 2001 is attached

<sup>11</sup> The present survey was compared to the following prior surveys.

<u>Survey</u>	<u>Year</u>	<u>Scale</u>	<u>Datum</u>
H2741	1905	1:40,000	Unknown
H5428	1933	1:20,000	Valdez
H9512	1975	1:20,000	NAD27

With the exception of a few charted bottom characteristics, H2741 has been superseded by the survey work conducted in 1933. Prior survey H5428 was conducted using early echo sounder technology, leadlines, and visual positioning. Present survey depths reflect a consistent shoal bias of 1-3 fathoms. These depth differences can be attributed to present state-of-the-art in positioning, sounding, and data acquisition techniques. Some bottom characteristics were transferred to the present survey at deeper depths where the hydrographer was not required to take bottom samples. H9512 is listed as a Category 1 Hydrographic Data Evaluation Group (HDEG) survey in a memo dated September 10, 1990 and has not received final processing. The present survey depths reflect a consistent shoal bias of 0.5-1 fathom with the 1975 survey work. With the transfer of the bottom characteristics, the present survey is adequate to supersede all prior surveys within the common area.

<sup>12</sup> Concur

<sup>13</sup> Office comparison was made with the 18<sup>th</sup> Edition.

<sup>14</sup> PHB Revision -- Strikethrough ~~and chart 16702 (10<sup>th</sup> Ed.; June 13, 1998, 1:40,000)~~ Chart is outside of survey area.

<sup>15</sup> PHB Revision -- Strikethrough ~~s~~

<sup>16</sup> PHB Revision -- Strikethrough ~~and 16702~~

<sup>17</sup> Concur

<sup>18</sup> PHB Revision -- Insert least

<sup>19</sup> PHB Revision -- Insert least

<sup>20</sup> PHB Revision -- Insert least

<sup>21</sup> PHB Revision -- Strikethrough ~~27~~ and replace with 35 at Lat. 60°04'45.0"N, Long. 147°38'20.0"W

- 
- 22 PHB Revision -- Strikethrough (Pos. #135067) at  $60^{\circ}04'50.118''N$ ,  $147^{\circ}38'14.224''W$  (464540.6 E, 6660557.1 N)
- 23 PHB Revision -- Strikethrough a
- 24 PHB Revision -- Add s
- 25 PHB Revision -- Strikethrough 33 and replace with 35-44
- 26 PHB Revision -- Strikethrough (Pos. # 126784)
- 27 PHB Revision -- Revise GP to  $\phi 60^{\circ}04'22.0''N$
- 28 PHB Revision -- Revise GP to  $\lambda 147^{\circ}39'13.0''W$
- 29 PHB Revision -- Strikethrough (463633.9 E, 6659750.4 N)
- 30 PHB Revision -- Strikethrough a
- 31 PHB Revision -- Add s
- 32 PHB Revision -- Strikethrough 39 and replace with 39-42
- 33 PHB Revision -- Strikethrough (Pos. # 498801)
- 34 PHB Revision -- Revise GP to  $\phi 60^{\circ}05'23.0''N$
- 35 PHB Revision -- Strikethrough (465898.6 E, 6661634.0 N)
- 36 PHB Revision -- Insert least
- 37 PHB Revision -- Insert least
- 38 PHB Revision -- Insert least
- 39 PHB Revision -- Strikethrough a
- 40 PHB Revision -- Add s
- 41 PHB Revision -- Strikethrough 51 and replace with 53-58
- 42 Concur
- 43 Concur
- 44 Concur
- 45 PHB Revision -- Strikethrough 67 and replace with 66
- 46 Concur
- 47 Filed with the hydrographic data
- 48 Filed with the hydrographic data
- 49 Charted as part of ledge
- 50 Concur
- 51 Concur
- 52 Do not concur. Chart these particular ledges as rocks based on the scale of the chart.
- 53 Concur
- 54 Filed with the hydrographic data
- 55 Copy attached
- 56 Concur
- 57 Concur



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

NOAA Ship RAINIER

December 18, 2000

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

**ADVANCE  
 INFORMATION**

Dear Sir or Madam:

It is requested that the following dangers to navigation be included in the Local Notice to Mariners. The NOAA Ship RAINIER positioned these features while conducting hydrographic survey H11004 in Prince William Sound, Alaska, in September - October 2000. The dangers are shown graphically on the attached chartlets. The following dangers to navigation affect the following charts:

<u>Chart</u>	<u>Scale</u>	<u>Edition</u>	<u>Date</u>
16701	1:81,436	17 <sup>th</sup>	25-July-1998
16700	1:200,000	26 <sup>th</sup>	19-September-1998

The positions are on the North American Datum of 1983 (NAD83) datum and depths have been corrected to Mean Lower Low Water (MLLW) using observed water level data.

<u>Feature</u>	<u>Depth (fm)</u>	<u>Latitude (N)</u>	<u>Longitude (W)</u>	<u>Depth (m)</u>
Sounding	0¾	60° 04' 00.764"	147° 31' 20.987"	1.6
Sounding	1¼	60° 03' 03.347"	147° 33' 26.127"	2.2
Sounding	1½	60° 02' 31.658"	147° 34' 16.673"	3.2
Sounding	2½	60° 02' 01.597"	147° 34' 42.379"	4.7
Sounding	3¼	60° 03' 28.386"	147° 32' 07.888"	5.8
Sounding	5¼	60° 02' 55.550"	147° 33' 52.672"	9.9
Sounding	5¾	60° 02' 29.480"	147° 34' 30.032"	10.6
Sounding	6¼	60° 02' 38.820"	147° 34' 14.238"	11.8
Sounding	6½	60° 03' 32.643"	147° 32' 46.080"	12.0
Sounding	8½	60° 03' 28.320"	147° 33' 06.433"	15.8
Sounding	9½	60° 03' 53.866"	147° 31' 46.132"	17.8

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 P139-RA-00 and Danger to Navigation message RA-13-00. More information on current RAINIER survey projects may be obtained by e-mail; contact the Field Operations Officer at FOO.RAINIER@NOAA.GOV.

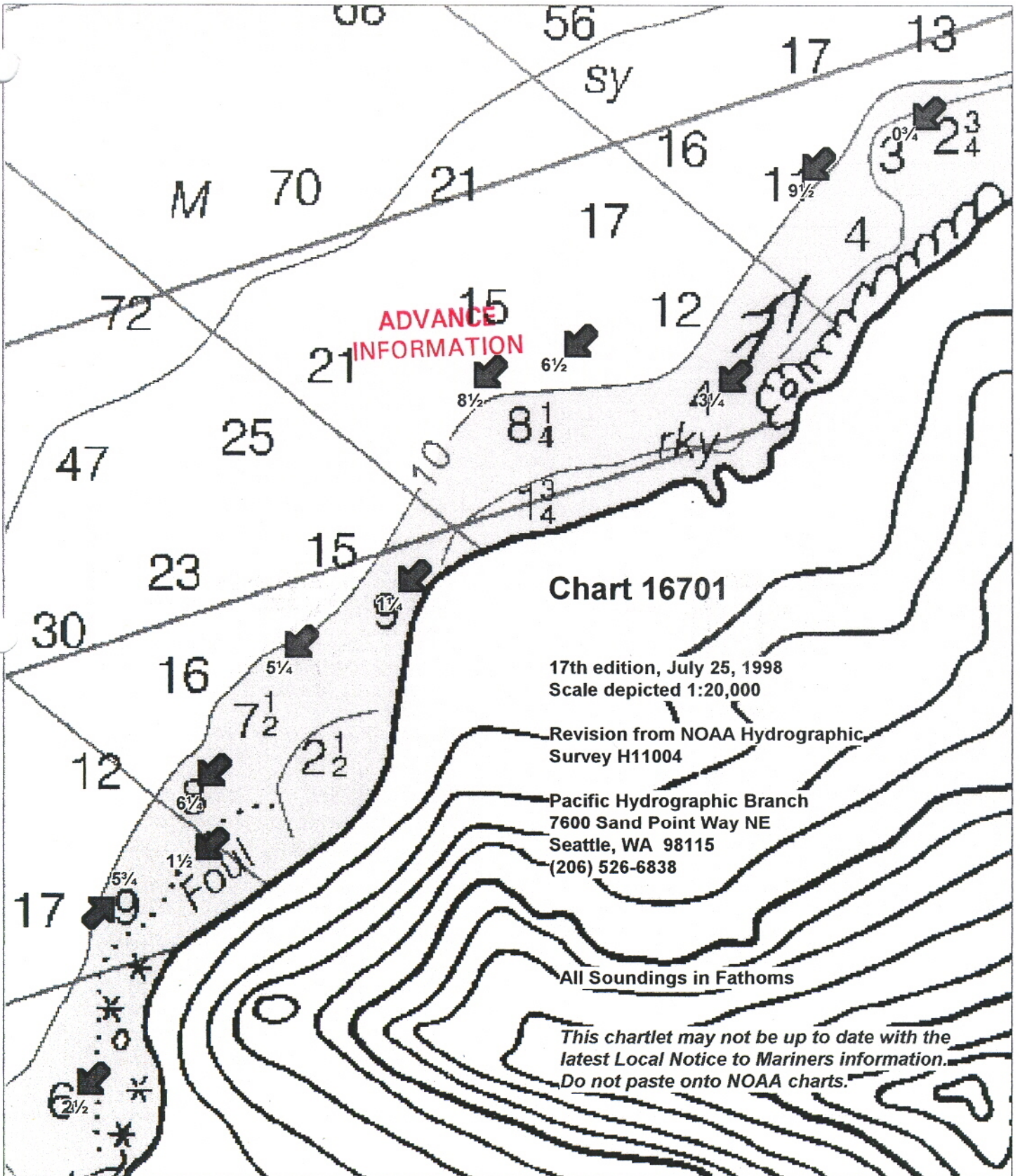
Sincerely,

Daniel R. Herlihy  
 Commander, NOAA  
 Commanding Officer

Attachment

cc: NIMA N/CS261  
 PMC N/CS34





**ADVANCE  
INFORMATION**

**Chart 16701**

17th edition, July 25, 1998  
Scale depicted 1:20,000

Revision from NOAA Hydrographic  
Survey H11004

Pacific Hydrographic Branch  
7600 Sand Point Way NE  
Seattle, WA 98115  
(206) 526-6838

All Soundings in Fathoms

*This chartlet may not be up to date with the  
latest Local Notice to Mariners information.  
Do not paste onto NOAA charts.*





UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SERVICE  
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: February 13, 2001

HYDROGRAPHIC BRANCH: Pacific  
HYDROGRAPHIC PROJECT: OPR-P139-RA-2000  
HYDROGRAPHIC SHEET: H-11004

LOCALITY: Prince William Sound, AK  
TIME PERIOD: September 14 - October 13, 2000

TIDE STATION USED: 945-4561 Perch Point, AK  
Lat.  $60^{\circ} 7.6'N$  Lon.  $147^{\circ} 23.7'W$   
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters  
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 3.254 meters

REMARKS: RECOMMENDED ZONING  
Use zone(s) identified as: PWS23.

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.

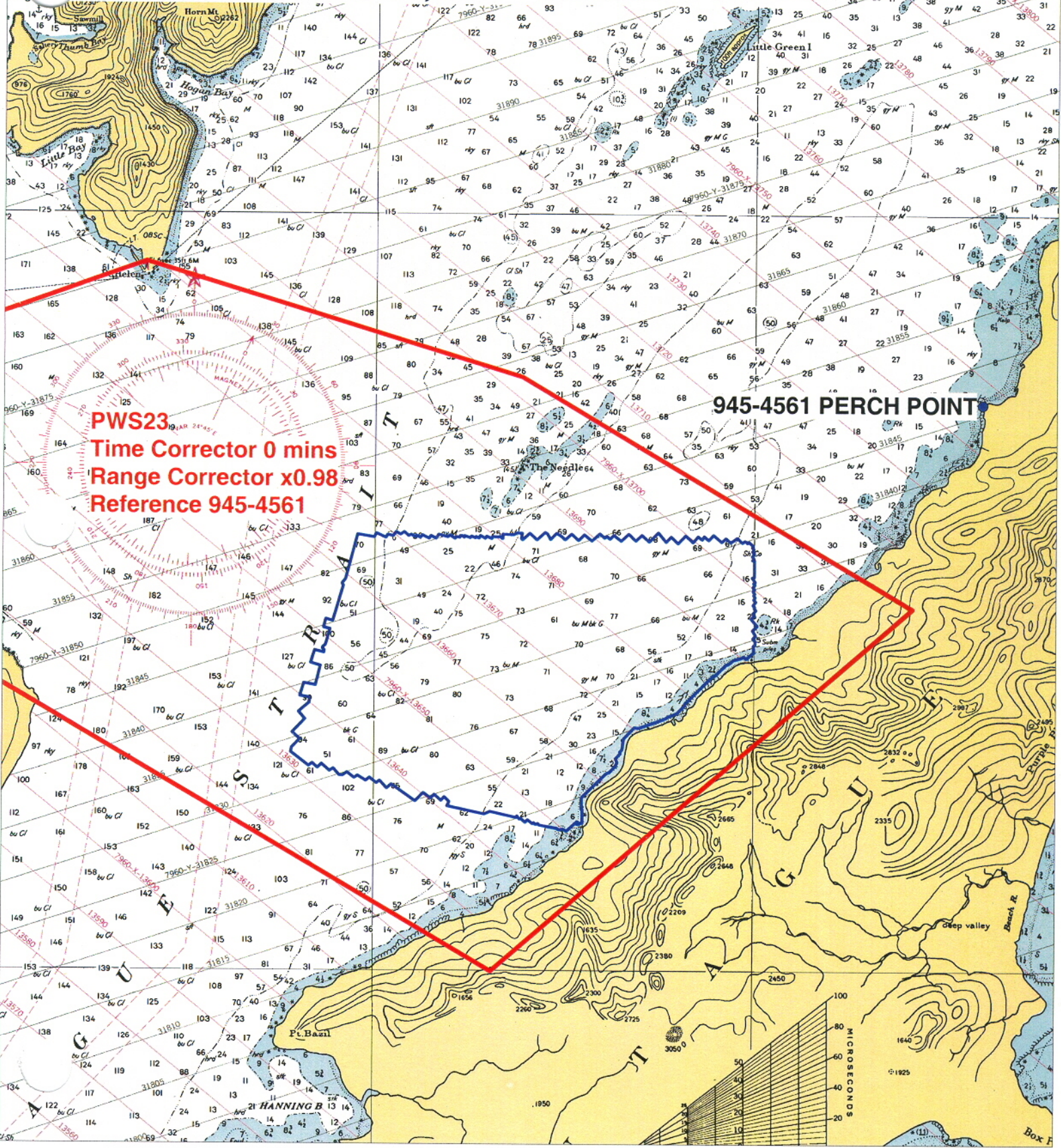
*Thomas V. Mew* 2/13/01  
-----  
CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION



Printed on Recycled Paper



# Final Tidal Zoning for OPR-P139-RA-2000 Prince William Sound, AK - Sheet H-11004



**PWS23**  
Time Corrector 0 mins  
Range Corrector x0.98  
Reference 945-4561

**945-4561 PERCH POINT**

Final tide zone node point locations for OPR-P139-RA-2000,  
Sheet H-11004.

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 PWS23			
-147.430708 60.080034	945-4561	0	0.98
-147.614981 59.99982			
-147.833691 60.063871			
-147.909718 60.046036			
-147.976527 60.06845			
-147.996234 60.084179			
-147.915026 60.129755			
-147.767908 60.155922			
-147.602299 60.130868			
-147.430708 60.080034			

**HYDROGRAPHIC SURVEY STATISTICS**

**H11004**

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

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

**SHORELINE DATA**

- SHORELINE MAPS (List):
- PHOTOBATHYMETRIC MAPS (List):
- NOTES TO THE HYDROGRAPHER (List):
- SPECIAL REPORTS (List):
- NAUTICAL CHARTS (List):

**OFFICE PROCESSING ACTIVITIES**

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

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	EVALUATION	TOTALS
POSITIONS ON SHEET			
POSITIONS REVISED			
SOUNDINGS REVISED			
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			57
COMPARISON WITH PRIOR SURVEYS AND CHARTS			
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT			52
GEOGRAPHIC NAMES			
OTHER (Chart Compilation)			32
USE OTHER SIDE OF FORM FOR REMARKS	TOTALS		141

Pre-processing Examination by	Beginning Date	02/05/2001	Ending Date	
Verification of Field Data by R. Davies, R. Mayor, E. Domingo, L. Deodato	Time (Hours)	57	Ending Date	
Verification Check by	Time (Hours)		Ending Date	
Evaluation and Analysis by L. Deodato	Time (Hours)	52	Ending Date	12/13/2002
Inspection by B. Olmstead	Time (Hours)	36	Ending Date	12/19/2002

APPROVAL SHEET  
H11004

Initial Approvals:

The survey and associated records have been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The survey records and digital data comply with NOS requirements except where noted in the Descriptive Report and are adequate to supersede prior surveys and nautical charts in the common area.

*Bruce A. Ombstad*  
for Dennis Hill \_\_\_\_\_ Date: 3/21/2003  
Chief, Cartographic Team  
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 Descriptive Report.

*John E. Lowell, Jr.*  
John E. Lowell, Jr. \_\_\_\_\_ Date: 3/31/03  
Commander, NOAA  
Chief, Pacific Hydrographic Branch

AWOIS check

5/7/03 mCR

