

H11267

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-10-11-03**

*Registry No.* ..... **H-11267**

### LOCALITY

*State* ..... **Alaska**

*General Locality* ..... **Approaches to Port Valdez &  
Valdez Harbor**

*Sublocality* ..... **Jack Bay**

.....  
**2003**  
.....

**CHIEF OF PARTY**  
.....  
**CDR John W. Humphrey, NOAA**

### LIBRARY & ARCHIVES

**DATE** .....

## HYDROGRAPHIC TITLE SHEET

H11267

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-10-11-03

State AlaskaGeneral Locality Approaches to Port Valdez and Valdez HarborSublocality Jack BayScale 1:10,000Date of Survey 8/20/2003 - 8/29/2003Instructions Date 8/28/2003Project No. OPR-P151-RA-03Vessel RA5 (1006), RA6 (1015), RA1 (1101), RA2 (1103)Chief of Party CDR John W. HumphreySurveyed by RAINIER PersonnelSoundings taken by echo sounder, hand lead, pole Knudsen 320M, Reson SeaBat 8101,Graphic record scaled by RAINIER Personnel Seabeam/Elac 1180Graphic record checked by RAINIER PersonnelEvaluation by R.Shipley Automated plot by HP Designjet 1050CVerification by R.ShipleySoundings in Fathoms at MLLWREMARKS: All times are recorded in UTC**Revisions and annotations appearing as endnotes 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 MLLW unless****otherwise noted. UTM Projection (zone 6).**

# Descriptive Report to Accompany Hydrographic Survey H11267

Project OPR-P151-RA-03  
Approaches to Port Valdez and Valdez Harbor, Alaska  
Scale 1:10,000  
August 2003  
**NOAA Ship RAINIER**  
Chief of Party: Commander John W. Humphrey, NOAA

## A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-P151-RA-03, dated August 28, 2003, Draft Standing Project Instructions dated March 21, 2001, and NOS Hydrographic Specifications and Deliverables dated March 2003. The survey area is Jack Bay on the northern side of Prince William Sound. This survey corresponds to sheet "D" in the sheet layout provided with the Letter Instructions.

One hundred percent shallow-water multibeam (SWMB) coverage was obtained in the survey area in waters 8 meters and deeper. In waters less than 8 meters additional coverage was obtained to acquire least depths over significant features or shoals, as appropriate for this survey. Vertical-beam echo sounder (VBES) data were acquired in depths from 4 to 20 meters to define the four-meter curve and to aid in the planning of SWMB data acquisition.<sup>1</sup>

Data acquisition was conducted from August 20 to August 29, 2003 (DN 232 to 241).

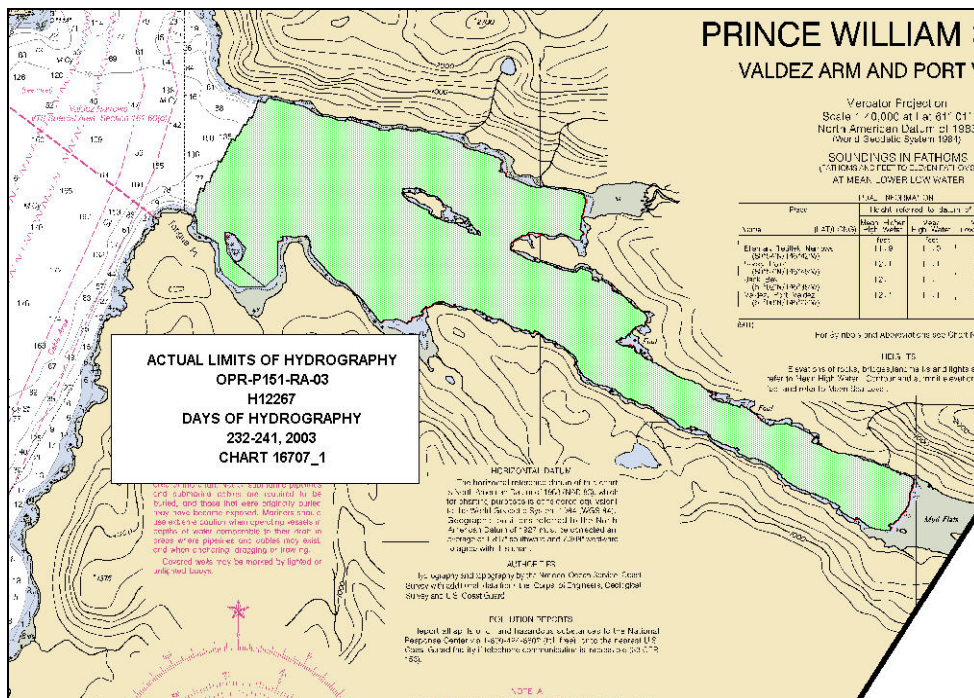


Figure 1. H11267 Survey Limits.

## 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-P151-RA-03 Data Acquisition and Processing Report (DAPR)*<sup>2</sup>, 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 and her survey launches RA1, RA2, RA5, and RA6. Vessels RA5 and RA6 were used to acquire shallow-water multibeam (SWMB) soundings and sound velocity profiles. Vessels RA1 and RA2 were used to acquire vertical-beam echo soundings (VBES) and detached positions (DPs) for shoreline verification. Vessel RA1 was also used to collect bottom samples.

No unusual vessel configurations were used for data acquisition.<sup>3</sup>

### B2. Quality Control

#### Crosslines

Vertical Beam Echo Sounder (VBES) crosslines including buffer lines totaled 18.34 nautical miles, comprising 14.82% of mainscheme hydrography. Crosslines generally agreed within 1 meter of mainscheme hydrography.

Shallow-Water Multibeam (SWMB) crosslines totaled 4.74 nautical miles, comprising 4.55% of SWMB hydrography. The mainscheme bathymetry was manually compared to the XL nadir beams in CARIS subset mode and agreed well with differences averaging approximately 0.5 meter.

A statistical Quality Control Report has been conducted on representative data collected with each system used on this survey and is included in the *OPR-P151-RA-03 DAPR*. All systems collect data that meet IHO Order 2 specifications.<sup>4</sup>

Through manual examination of the data and statistical analysis of data accuracy, standards for this survey have been met.<sup>5</sup>

#### Junctions

The following contemporary survey junctions with H11267:

<u>Registry #</u>	<u>Scale</u>	<u>Date</u>	<u>Junction side</u>
H11182	1:10,000	2002	Northwest

Survey H11182 has been removed from the ship. Final comparisons will be made at the Pacific Hydrographic Branch (PHB) after the application of smooth tides.<sup>6</sup>

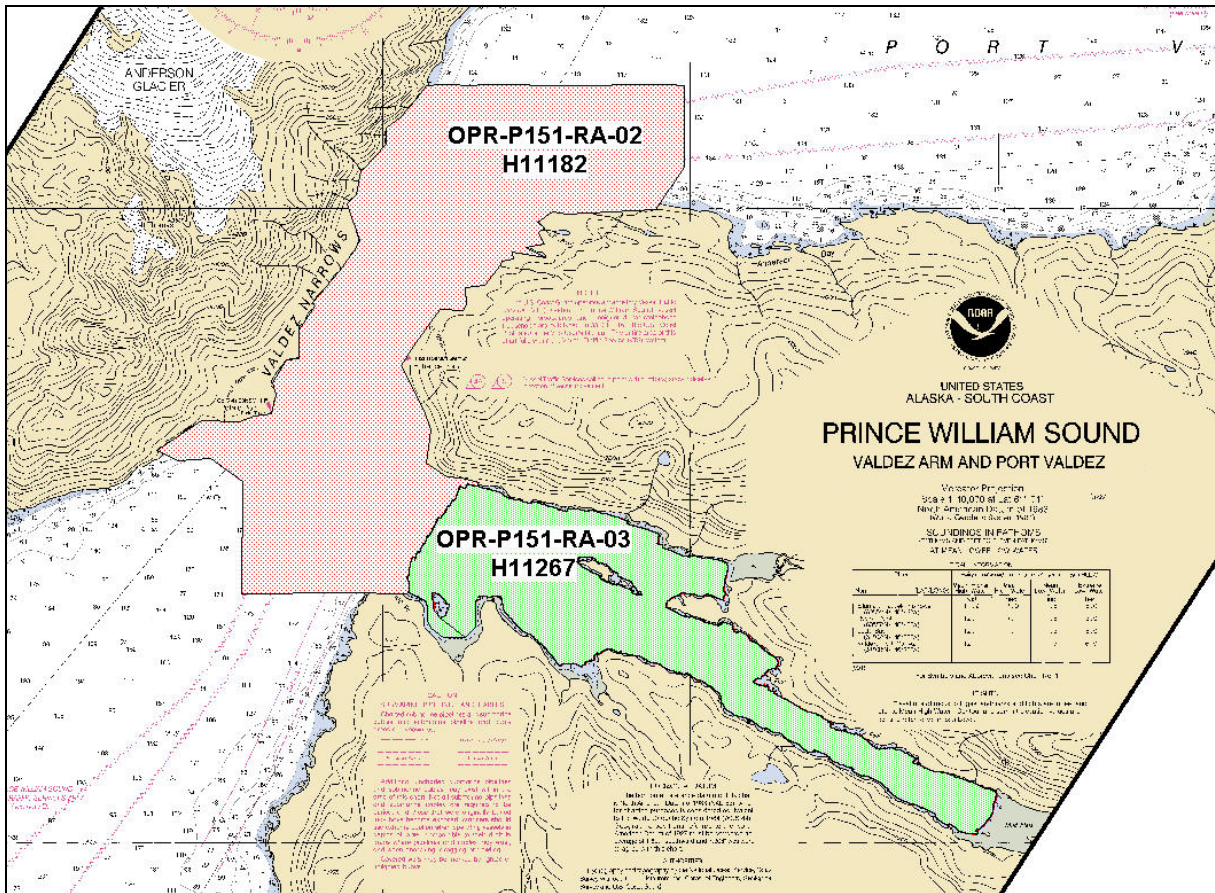


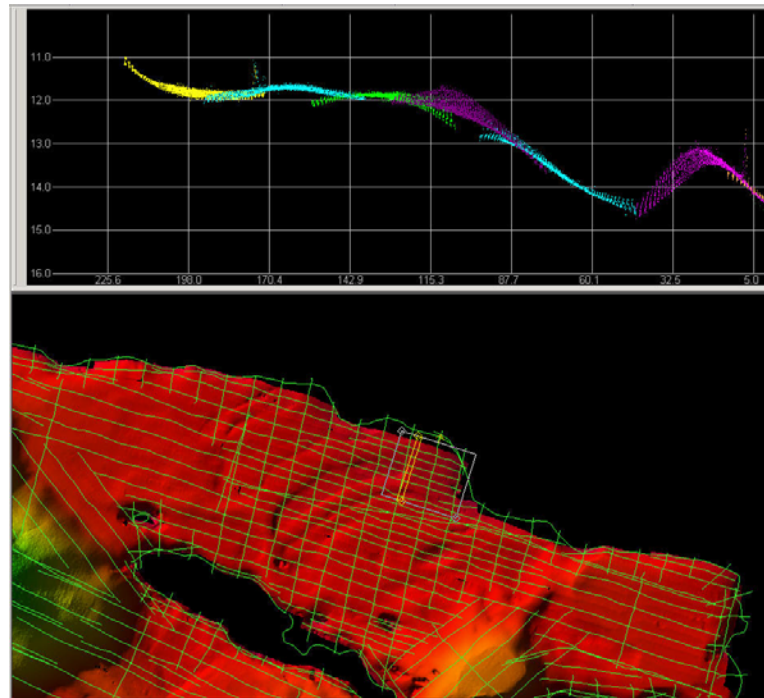
Figure 2. H11267 Junction Surveys.

**Data Quality Factors**

Due to melting glacial ice, river runoff, and the effects of tidal currents, a sharp demarcation of water masses was often observed in the field. This proved to be problematic in the acquisition and application of sound velocity correctors. After correction for sound velocity in Caris HIPS & SIPS, some lines still exhibited the characteristic "frowns" indicative of inaccurate sound velocity corrections. To correct these sound velocity problems, correctors were often applied based on the geographic position of the cast, rather than the time the cast was collected. Such application was performed on a line-by-line basis only on individual lines that exhibited profound sound velocity problems. Despite the best efforts of the Hydrographer to conduct sufficient sound velocity casts distributed both spatially and temporally, and to correct for sound velocity errors in post processing through methods previously mentioned, sound velocity errors were still noticeable in several regions. To compensate, the Hydrographer, where possible, rejected soundings obviously in error on the outer beams. The Hydrographer feels that the only viable solutions in an area such as Jack

Bay would be continuous sound velocity profiling, or by water column “zoning.” RAINIER has forwarded data from Jack Bay to N/CS11 and Caris in order to develop methods for the latter.

Sound velocity problems up to 0.75m occurred mainly within the northern part of Jack Bay behind the most prominent island where high amounts of fresh water runoff occurred. Figure 3 contains an example of sound velocity problems.<sup>7</sup>



*Figure 3. H11267 Sound Velocity Problem*

In several areas near shore 10 meters and shoaler, thick eelgrass often obscured the detection of the bottom. On the VBES fathograms, acoustic returns from eelgrass usually appeared as a faint trace clearly separated from the bottom that had a darker, more definitive trace. In these cases, the VBES digital data were edited as necessary to reflect the true bottom. In the SWMB data, removal of soundings obtained over eelgrass was not possible in Caris HIPS & SIPS Swath Edit, as there is no definitive way to determine if a sounding is on a feature such as a rock, or on eelgrass. In Caris HIPS & SIPS Subset Mode, in some instances, it was possible to discern the true bottom, as eelgrass often appeared as soundings “disconnected” from the continuous bottom. In these instances soundings over eelgrass were rejected. However, when unable to clearly distinguish between the bottom and eelgrass, the eelgrass was not rejected. Areas with eelgrass were noted by the Hydrographer during shoreline verification<sup>8</sup> and are also indicated in the “H11267\_ShorelineNotes” table of the Detached Position and Bottom Sample Plot.<sup>9</sup>

### **B3. Data Reduction**

Data reduction procedures for survey H11267 conform to those detailed in the *OPR-P151-RA-03 DAPR*.

## **C. VERTICAL AND HORIZONTAL CONTROL**

A complete description of vertical and horizontal control for survey H11267 can be found in the *OPR-P151-RA-03 Horizontal and Vertical Control Report*,<sup>10</sup> 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 the U.S. Coast Guard beacon at Potato Point (298 kHz) were utilized during this survey. Launch-to-launch DGPS performance checks using U.S. Coast Guard beacons Cape Hinchinbrook (292 kHz), Potato Point (298 kHz), and Kenai (310 kHz) as the check stations were performed in accordance with Section 3.2 of the FPM. Copies of the performance checks are included in the *OPR-P151-RA-03 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 Valdez, AK (945-4240) served as control for datum determination and as the primary source for water level reducers for survey H11267.

No tertiary gauges were required.

All data were reduced to MLLW using unverified observed tides from station Valdez, AK using the tide file 9454240.tid and time and height correctors using the zone corrector file P151RA2003CORP.zdf.

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 H11267 was forwarded to N/OPS1 on September 3, 2003. A copy of the request is included in Appendix IV.<sup>11</sup>

## **D. RESULTS AND RECOMMENDATIONS**

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

No AWOIS items were located within the limits of H11267.<sup>12</sup>

## **D.2 Chart Comparison**

Survey H11267 was compared with the following charts:

16707 (10<sup>th</sup> Ed.; September 29, 2001, 1:40,000)

16708 (25<sup>th</sup> Ed.; October 6, 2001, 1:79,291)

16700 (28<sup>th</sup> Ed.; July 2003, 1:200,000)

### **Chart 16707**

Depths from survey H11267 were generally within two fathoms of the depths on chart 16707. Charted soundings are accurate, but in many cases shoaler soundings were found near already charted soundings. Three (3) soundings on the south side, at the second cove from the mouth of Jack Bay were found to be 6-8 fathoms deeper than charted. These differences can be attributed to steep slope characteristic of the glacially cut area and increased bottom coverage using SWMB methods.

### **Chart 16708**

Depths from survey H11267 generally matched well with few soundings charted 0-2 fathoms deeper than survey depths. Charted soundings are accurate, but in many cases shoaler soundings were found near already charted soundings. This can be attributed to increased bottom coverage using SWMB methods and a smaller chart scale.

### **Chart 16700**

Depths from survey H11267 matched the position of charted soundings within the allotted chart scale distance, but in many cases shoaler and deeper surveyed soundings were found near already charted soundings. This can be attributed to increased bottom coverage using SWMB methods and a smaller chart scale.

The Hydrographer has determined that data accuracy standards and bottom coverage requirements have been met and survey data are adequate to supersede charted data in their common areas.

Final chart comparisons will be made at the Pacific Hydrographic Branch after the application of smooth tides.<sup>13</sup>

## **D.3 Shoreline**

### **Shoreline Source**

Vector photogrammetric project AK-0208 was supplied by N/NGS3 in the form of cartographic feature file GC-10539 (CFF). RAINIER conducted limited shoreline verification of the CFF. In addition, features shown on the current editions of charts 16707



that were not depicted on the shoreline source document were digitized in MapInfo by RAINIER personnel and displayed in Hypack for field verification.

### Shoreline Verification

Limited shoreline verification was conducted near predicted low water in accordance with the Standing Project Instructions and FPM sections 6.1 and 6.2. Detached positions (DPs) taken during shoreline verification were recorded in HYPACK, on DP forms, and processed in Pydro. These indicate revisions to features and features not found on the verified shoreline. In addition, annotations describing shoreline were recorded on hard copy plots of digital shoreline. DP forms are included in Section I of the *Separates to be Included with Survey Data*.<sup>14</sup>

A detailed Detached Position and Bottom Sample plot in 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. Verified CFF shoreline that did not require revision is in MapInfo table "H11267\_CFF\_Shoreline" and shown in black. Changes to MHW shoreline are displayed in red; and all other shoreline and foul line updates are displayed in pink. All shoreline revisions are depicted in the MapInfo table "H11267\_Shoreline\_Updates." Charted MLLW and charted ledges, when used for reference purposes or when source data were not available, is depicted in the MapInfo table "H11267\_Charted\_Shoreline" and displayed in brown.

### Source Shoreline Changes and New Features<sup>15</sup>

Charted (16707) rock at position 61°01'30.55" N , 146°36'02.73"W (521576.22E, 6765654.77N) was disproved by 100% SWMB. The Hydrographer recommends removing charted (16707) rock.<sup>16</sup>

Charted (16707) rock at position 61°01'29.70"N , 146°35'53.13"W (521720.40E, 6765629.37N) was disproved by 100% SWMB. The Hydrographer recommends removing charted (16707) rock.<sup>17</sup>

Charted (16707) rock at position 61°02'11.93"N , 146°36'20.44"W (521302.57E, 6766933.41N) was disproved by 100% SWMB. The Hydrographer recommends removing charted (16707) rock.<sup>18</sup>

Charted (16707) rock at position 61°00'24.60"N, 146°30'07.39"W (526319.66E, 6763148.76N) was disproved by 100% SWMB. The Hydrographer recommends removing charted (16707) rock.<sup>19</sup>

Charted (16707) rock at position (61°01'56.75"N, 146°38'23.41"W (519453.48E, 6766460.06N) is the extent of a new ledge. DP#2238122 is the inshore extent of the ledge. The new ledge was positioned during shoreline verification at approximately MLLW by a VBES buffer. The Hydrographer recommends removing the charted (16707) rock and charting the new ledge using the VBES buffer as the entire extent.<sup>20</sup>

Charted (16707) islet at position 61°01'25.88"N, 146°35'41.98"W (521888.56E, 6765512.33N) is the new extent of mean high water. The Hydrographer recommends removing the charted islet and charting the mean high water at the islet extents.<sup>21</sup>

### **Recommendations**

The Hydrographer recommends that the shoreline as depicted on the Detached Position and Bottom Sample and final sounding MapInfo digital file supersede and complement shoreline information compiled on the CFF and charts as noted.<sup>22</sup> In addition, field notes made by the Hydrographer, including verification of source features or charted features if no source shoreline was available are submitted in the digital MapInfo file "H11267\_Shoreline\_Notes".

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

No dangers to navigation (DTONs) were found within the limits of H11267.<sup>23</sup>

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

No aids to navigation (ATONs) are located within the limits of H11267.<sup>24</sup>

### **D.6 Miscellaneous**

Bottom samples were collected and are depicted on the Detached Position and Bottom Sample Plot. In general the bottom samples do not agree with the charted bottom samples.<sup>25</sup>

In February 2004, the RAINIER was informed of a bug in CARIS SBEdit that incorrectly changes the Observed depths if the VBES data is processed in the following manner: SVP correct (at least once), followed by depth edits (includes accept/reject flagging), followed by an additional SVP correct and merge. By re-converting the raw VBES lines on survey H11267 and copying the SLRange, SLRangeLineSegments, SLRangeTmIdx files into the original processed line file folders, and re-merging, the errors from the Sbedit bug were removed. After comparing the original data to the reconverted data, it was found that the soundings that had the same latitude and longitude had no depth differences. The submitted HDCS\_DATA for this survey includes the corrected VBES depths and meets NOS Hydrographic Survey Specifications and Deliverables.

**E. APPROVAL**

As Chief of Party, I have ensured that standard field surveying and processing procedures were followed in producing this survey in accordance with the Hydrographic Manual, Fourth Edition, Hydrographic Survey Guidelines, Field Procedures Manual and the NOS Hydrographic Surveys Specifications and Deliverables, as updated for 2003.

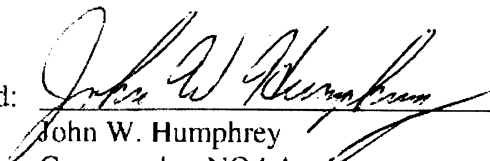
The digital data and supporting records have been reviewed by me, are considered complete and adequate for charting purposes, and are approved. All records are forwarded for final review and processing to N/CS34, Pacific Hydrographic Branch.

Survey H11267 is complete and adequate to supersede charted soundings<sup>25</sup> in their common areas. No additional work is required for this survey.<sup>26</sup>

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

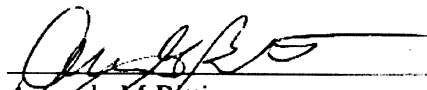
<u>Title</u>	<u>Date Sent</u>	<u>Office</u>
Data Acquisition and Processing Report for OPR-P151-RA-03	4/30/2004	N/CS34
Horizontal and Vertical Control Report for OPR-P151-RA-03	4/15/2004	N/CS34
Coast Pilot Report for OPR-P151-RA-03	5/14/2004	N/CS26

Approved and Forwarded:

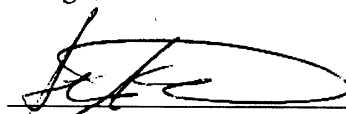
  
 \_\_\_\_\_  
 John W. Humphrey  
 Commander, NOAA  
 Commanding Officer

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

Survey Sheet Manager:

  
 \_\_\_\_\_  
 Amanda M. Bittinger  
 Ensign, NOAA

Field Operations Officer:

  
 \_\_\_\_\_  
 Stephanie A. Koes  
 Lieutenant (junior grade), NOAA

## **Revisions Compiled During Office Processing and Certification**

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<sup>1</sup> Concur.

<sup>2</sup> Filed with the Project Records.

<sup>3</sup> Concur.

<sup>4</sup> PHB review of data by physical scientists indicates the data meets IHO Order 1 requirements.

<sup>5</sup> Concur with hydrographer's statements.

<sup>6</sup> Concur with clarification. Junction comparison was made with H11182 during office processing. Sounding and depth curves are in good agreement and a "Joins" note has been added to the smooth sheet.

<sup>7</sup> Refer to endnote #4.

<sup>8</sup> Eelgrass has been shown on the H-drawing based on hydrographic information.

<sup>9</sup> Filed with the Hydrographic Records.

<sup>10</sup> Filed with the Project Records.

<sup>11</sup> Appendix IV is filed with the hydrographic records. Approved Tide Note dated October 31, 2003 is attached.

<sup>12</sup> Concur.

<sup>13</sup> During office processing, survey H11182 was compared to charts 16707 (12th Ed., Dec 01, 2005) with very good agreement.

<sup>14</sup> Attached to report.

<sup>15</sup> An islet at 61/00/08.0N, 146/30/48.5W, shown on the Chart 16707, 10<sup>th</sup> Edition was located by the hydrographer. The islet was removed in subsequent editions of the chart. PHB recommends charting an islet at the above locations as shown on the Hdrawing.

<sup>16</sup> Concur.

<sup>17</sup> Concur.

<sup>18</sup> Concur.

<sup>19</sup> Concur.

<sup>20</sup> Concur.

<sup>21</sup> Concur.

<sup>22</sup> Concur with clarification. Shoreline verification has been analyzed during office processing and shown on the smooth sheet as warranted.

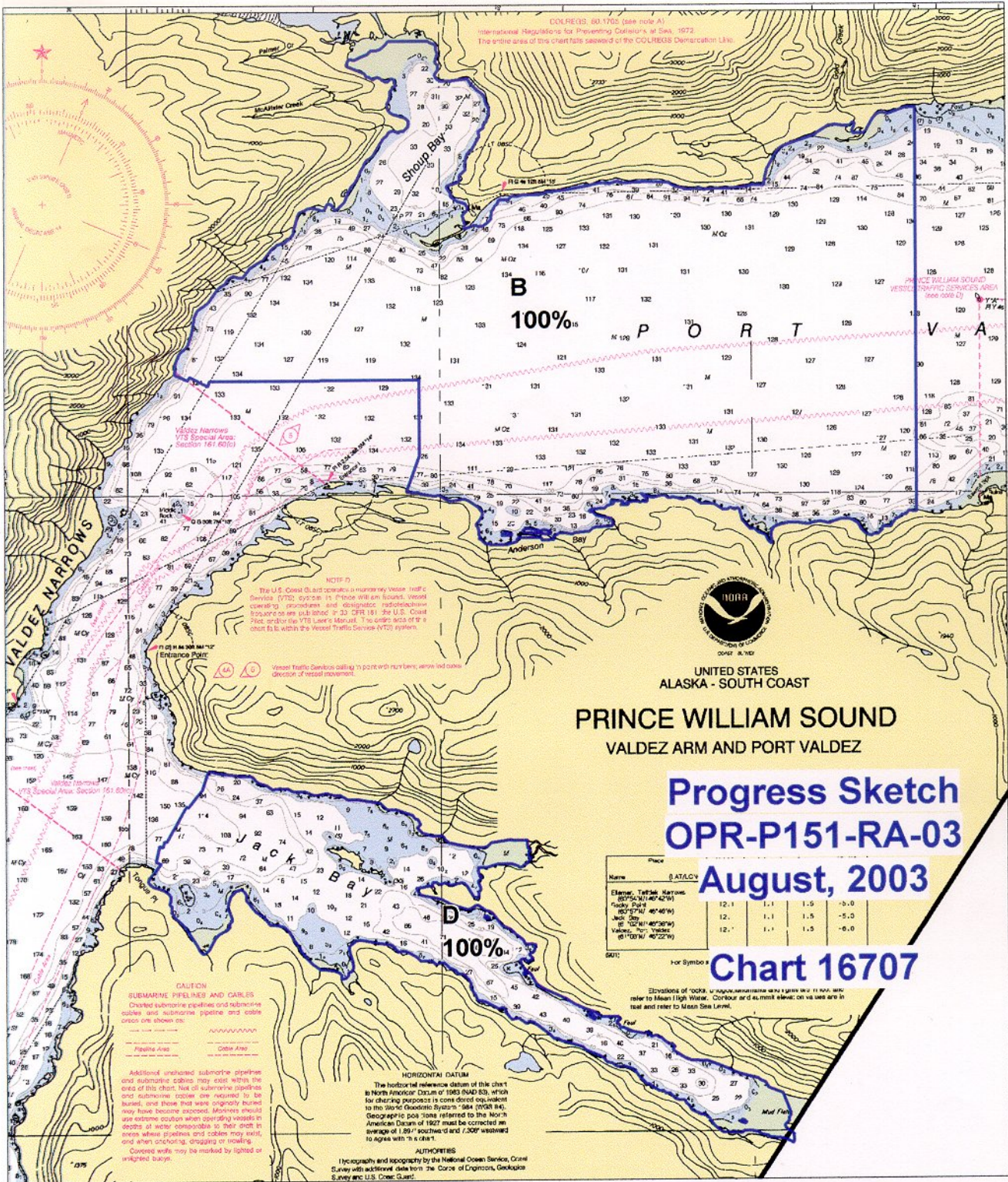
<sup>23</sup> Do not concur. A 9.92 m shoal was reported during office processing. A 52 fathom sounding has been previously applied to the chart.

<sup>24</sup> Concur.

<sup>25</sup> Concur. Some charted bottom samples were retained on the Hdrawing.

<sup>26</sup> and features

<sup>27</sup> Concur with hydrographer's statements.



Project	Sheet_Letter	H_num	HQ_Est_SNN	CumIPercCompPrev	CumIPercCompCur	SNN_CompCurH	CumSNNcor
OPR-P151	B	H11181	13.29	0	100	13.29	13.29
OPR-P151	D	H11267	3.75	0	100	3.75	3.75

Project	Month	LNM_Hydr	LNM_MB	SV_Casts	Bottom_Sam	AWOIS_Items	Tide_Gauge_Inst	DAS	DTime equip_H	DTime_Weather	D_Time_other_I	Inport_H
OPR-P15	August	423.48	341.88	43.00	15.00	0.00	0.00	11.00	4.50	0.00	0.00	48.00

# PRINCE WILLIAM VALDEZ ARM AND PORT

Mercator Projection  
Scale 1:40,000 at Latitude  
North American Datum  
(World Geodetic System)

SOUNDINGS IN FATHOMS AND FEET TO ELEVEN  
AN LOWER LOW

TIDAL INFORMATION		Height referred to
Mean Higher High Water	feet	11.9
Mean High Water	feet	12.1
Mean Low Water	feet	12.1
Mean Lower Low Water	feet	12.1

**SWMB Limits of Hydrgraphy**  
**OPR-P151-RA-03**  
**H11267**  
**Days of Hydrography**  
**232-241, 2003**  
**Chart 16701\_1**

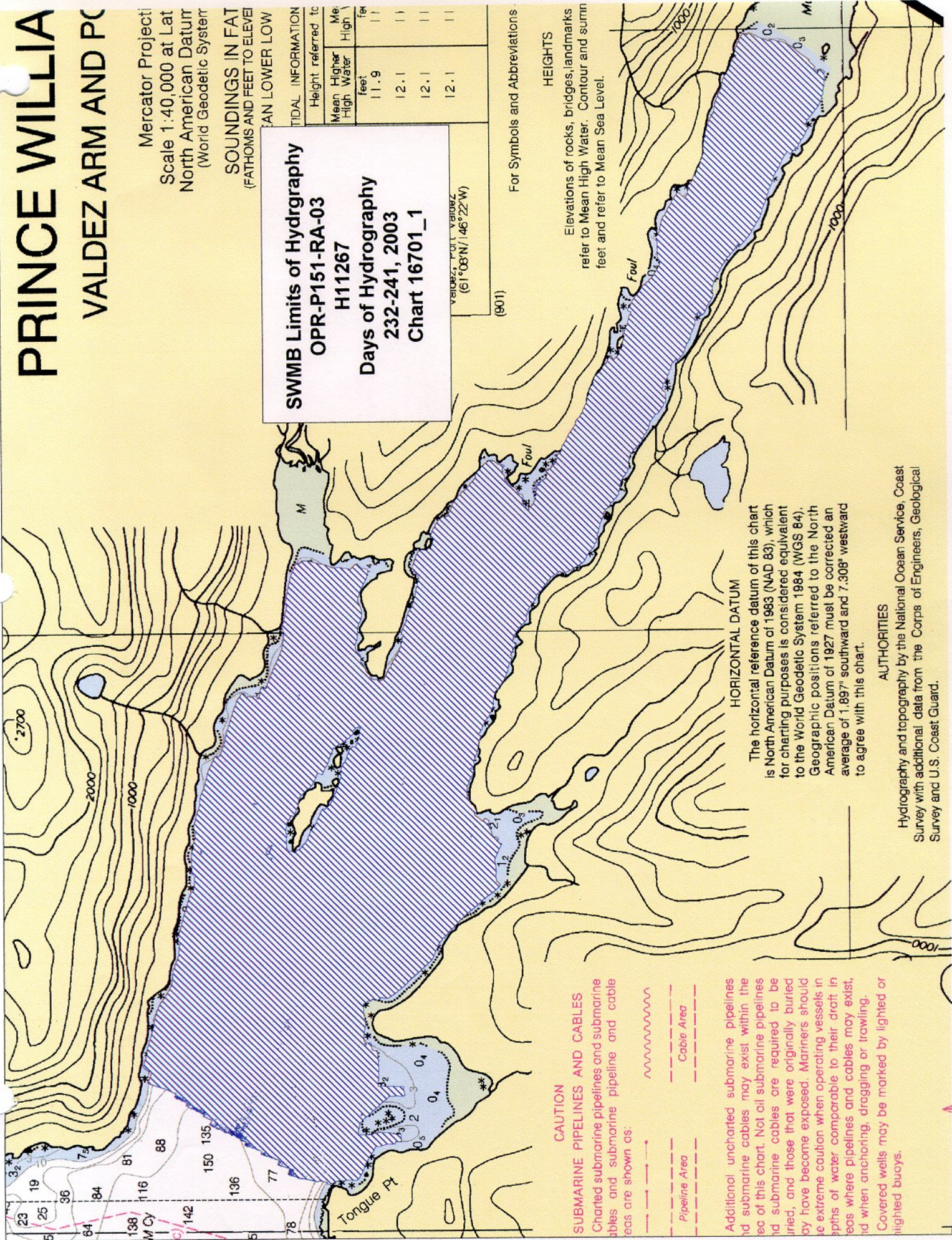
Valdez, Port of  
(61°08'N / 146°22'W)

(901)

For Symbols and Abbreviations

## HEIGHTS

Elevations of rocks, bridges, landmarks refer to Mean High Water. Contour and summits refer to Mean Sea Level.



# VALDEZ ARM AND FOUNDRY

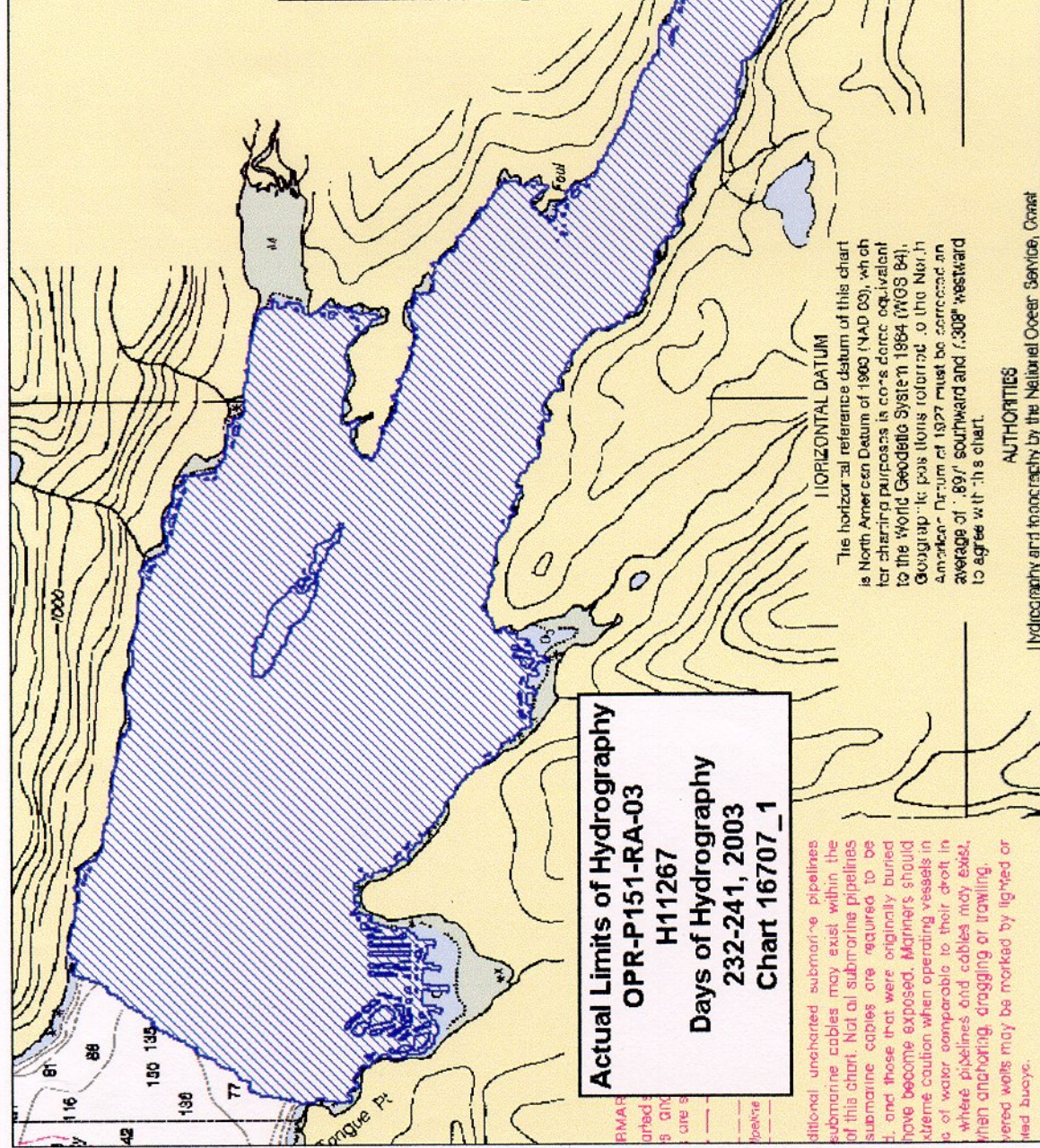
Mercator Projection  
 Scale 1:40,000 at Lat 61°  
 North American Datum of  
 1983 (World Geodetic System 1983)

**SOUNDINGS IN FATHOMS**  
 (FATHOMS AND FEET TO ELEVATION)  
 AT MEAN LOWER LOW WATER

Name	Place (LAT/LONG)	TOTAL INFORMATION		
		Mean High Water	Mean High Water	Mean High Water
		Height referred to datum		
		feet	feet	feet
Elmatar, Tattletale Narrows	(60°36'47.46"N 146°42'W)	1.9	11.0	11.0
Rocky Shoals	(60°57'N 146°46'W)	2.1	11.1	11.1
Jeck Bay	(61°02'N 146°38'W)	2.1	11.1	11.1
Valdez Pt. - Va. 462	(61°00'N 146°22'W)	2.1	11.1	11.1

For Symbols and Abbreviations see C

**HEIGHTS**  
 Elevations of rocks, bridges, landmarks and lights refer to Mean High Water. Contour and summit elevations refer to Mean Sea Level.



**Actual Limits of Hydrography**  
**OPR-P151-RA-03**  
**H11267**  
**Days of Hydrography**  
**232-241, 2003**  
**Chart 16707\_1**

Additional uncharted submarine pipelines, submarine cables may exist within the limits of this chart. Not all submarine pipelines and submarine cables are required to be marked on this chart. Mariners should exercise caution when operating vessels in the area of water comparable to their draft in which pipelines and cables may exist, when anchoring, dragging or trawling, or when using dredges or other bottom-mounted devices.

**HORIZONTAL DATUM**  
 The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of .89' southward and (.308" westward to agree with this chart.

**AUTHORITIES**  
 Hydrography and topography by the National Ocean Service, Coast

# H11267 DTON Report

**Registry Number:** H11267  
**State:** Alaska  
**Locality:** Port Valdez  
**Sub-locality:** Jack Bay  
**Project Number:** OPR-P151-RA-03  
**Survey Date:** 08/24/2003

## Charts Affected

Number	Version	Date	Scale
16707	10th Ed.	09/29/01	1:40000
16708	25th Ed.	10/06/01	1:79291
16700	27th Ed.	03/09/02	1:200000
16013	28th Ed.	04/14/01	1:969761
531	21st Ed.	02/02/02	1:2100000
500	7th Ed.	06/01/96	1:3500000
50	5th Ed.	07/30/94	1:10000000

## Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Shoal	9.92 m	061° 02' 13.860" N	146° 36' 14.407" W	---



**2.1) 1278/13****DANGER TO NAVIGATION****Survey Summary**

**Survey Position:** 061° 02' 13.860" N, 146° 36' 14.407" W  
**Least Depth:** 9.94 m  
**Timestamp:** 2003-236.21:32:44.994 (08/24/2003)  
**Survey Line:** h11267 / r5re\_2003 / 2003-236 / 048\_2128  
**Profile/Beam:** 1278/13  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

**Remarks:**

Shoal sounding

**Hydrographer Recommendations**

Chart sounding

**Cartographically-Rounded Depth (Affected Charts):**

5 ¼fm (16708\_1, 16700\_1, 16013\_1)

5fm 2ft (16707\_1, 531\_1)

9.9m (500\_1, 50\_1)

**S-57 Data**

[None]

**Office Notes**

**Concur. Current chart edition reflects 5.4 fm sounding on smooth sheet as 5 fm 2 feet.**

# H11267 Shoreline Report

**Registry Number:** H11267  
**State:** Alaska  
**Locality:** Port Valdez  
**Sub-locality:** Jack Bay  
**Project Number:** OPR-P151-RA-03  
**Survey Dates:** 8/20/2003 - 8/29/2003

Source Shoreline Changes, New Features, and Charted Features

Items for survey H11267, that needed further discussion and are associated with a detached position, have been flagged "Report" in Pydro in H11267.pss. Investigation/survey methods and recommendations are listed in the Remarks and Recommendation tabs.

## Charts Affected

Number	Version	Date	Scale
16707	10th Ed.	09/29/01	1:40000
16708	25th Ed.	10/06/01	1:79291
16700	27th Ed.	03/09/02	1:200000
16013	28th Ed.	04/14/01	1:969761
531	21st Ed.	02/02/02	1:2100000
500	7th Ed.	06/01/96	1:3500000
50	5th Ed.	07/30/94	1:10000000

## Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude
1.1	Rock	0.05 m	061° 00' 46.137" N	146° 32' 02.518" W
1.2	Rock	0.71 m	061° 01' 56.606" N	146° 39' 10.215" W
1.3	Rock	-1.81 m	061° 01' 48.703" N	146° 39' 02.278" W
1.4	Sounding	7.64 m	061° 01' 56.351" N	146° 38' 06.506" W
1.5	Sounding	-1.21 m	061° 02' 11.591" N	146° 36' 22.067" W
1.6	Sounding	-0.07 m	061° 01' 20.638" N	146° 35' 11.053" W
1.7	Sounding	-2.43 m	061° 00' 54.523" N	146° 33' 47.906" W
1.8	Sounding	-1.30 m	061° 01' 47.975" N	146° 35' 05.012" W

1.9	Rock	-5.23 m	061° 02' 19.332" N	146° 36' 50.372" W
1.10	Sounding	-5.83 m	061° 02' 13.992" N	146° 36' 36.036" W
1.11	Sounding	-4.40 m	061° 00' 15.103" N	146° 31' 10.467" W
1.12	Sounding	12.64 m	061° 00' 08.285" N	146° 30' 47.675" W
1.13	Sounding	12.33 m	061° 00' 28.426" N	146° 31' 54.686" W
1.14	Rock	2.03 m	061° 01' 28.882" N	146° 36' 03.550" W
1.15	Sounding	10.32 m	061° 00' 11.332" N	146° 30' 58.913" W
1.16	Sounding	15.35 m	061° 00' 16.470" N	146° 31' 14.339" W
1.17	Sounding	18.85 m	061° 01' 08.001" N	146° 34' 30.632" W
1.18	Sounding	10.51 m	061° 01' 04.663" N	146° 34' 27.883" W
1.19	Sounding	18.83 m	061° 00' 25.629" N	146° 31' 47.463" W
1.20	Sounding	-1.47 m	061° 01' 56.309" N	146° 35' 14.377" W
2.1	Shoal	9.94 m	061° 02' 13.860" N	146° 36' 14.407" W

# **1 - New Features**

## 1.1) 1238986

### Survey Summary

**Survey Position:** 061° 00' 46.137" N, 146° 32' 02.518" W  
**Least Depth:** 0.05 m  
**Timestamp:** 2003-238.16:18:56.000 (08/26/2003)  
**DP Dataset:** h11267 / r1ne\_2003 / 2003-238 / dp1238  
**Profile/Beam:** 3/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

New rk is offshore limit new foul area  
VBES buffer line is extent new foul area.

### Hydrographer Recommendations

Chart new rock and foul area. Remove charted (16707) foul area.

#### Cartographically-Rounded Depth (Affected Charts):

0fm (16708\_1, 16700\_1, 16013\_1)  
0fm 0ft (16707\_1, 531\_1)  
.0m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** VALSOU - 0.05 m

### Office Notes

Concur.

## 1.2) 2238136

### Survey Summary

**Survey Position:** 061° 01' 56.606" N, 146° 39' 10.215" W  
**Least Depth:** 0.71 m  
**Timestamp:** 2003-238.16:09:26.000 (08/26/2003)  
**DP Dataset:** h11267 / r2ne\_2003 / 2003-238 / dp2238  
**Profile/Beam:** 4/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

rk is ext new reef

### Hydrographer Recommendations

Chart new reef.

#### Cartographically-Rounded Depth (Affected Charts):

0 ¼fm (16708\_1, 16700\_1, 16013\_1)

0fm 2ft (16707\_1, 531\_1)

.7m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)

### Office Notes

Concur. Chart reef.

## 1.3) 2238145

### Survey Summary

**Survey Position:** 061° 01' 48.703" N, 146° 39' 02.278" W  
**Least Depth:** -1.81 m  
**Timestamp:** 2003-238.16:12:55.000 (08/26/2003)  
**DP Dataset:** h11267 / r2ne\_2003 / 2003-238 / dp2238  
**Profile/Beam:** 5/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

Hp new reef  
VBES buffer line is extent entire reef.

### Hydrographer Recommendations

Chart new reef.

#### Cartographically-Rounded Depth (Affected Charts):

1fm (16708\_1, 16700\_1, 16013\_1)  
-1fm 0ft (16707\_1, 531\_1)  
-1.8m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)  
**Attributes:** VALSOU - -1.81 m

### Office Notes

Concur. Chart reef as shown on SS.

## 1.4) 2238153

### Survey Summary

**Survey Position:** 061° 01' 56.351" N, 146° 38' 06.506" W  
**Least Depth:** 7.64 m  
**Timestamp:** 2003-238.16:24:38.000 (08/26/2003)  
**DP Dataset:** h11267 / r2ne\_2003 / 2003-238 / dp2238  
**Profile/Beam:** 6/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

Chd (16707) rk disproval

Charted (16707) rock at position 61°01'56.413"N, 146°38'06.659"W (519713.60E ,6766442.20N ) and DP#2238153 was disproved visually during shoreline verification by Hydrographer, 40m search radius, 5 min HW VBES search with 1m visibility and calm seas. 80% SWMB coverage exists.

### Hydrographer Recommendations

Remove charted (16707) rock.

#### Cartographically-Rounded Depth (Affected Charts):

4fm (16708\_1, 16700\_1, 16013\_1)

4fm 1ft (16707\_1, 531\_1)

7.6m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)

### Office Notes

Concur. Remove charted rock.



## 1.5) 2240235

### Survey Summary

**Survey Position:** 061° 02' 11.591" N, 146° 36' 22.067" W  
**Least Depth:** -1.21 m  
**Timestamp:** 2003-240.15:54:42.000 (08/28/2003)  
**DP Dataset:** h11267 / r2ne\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 1/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

Chd (16707) rk is swm ext new ldg

### Hydrographer Recommendations

Chart swm extent new ledge.

#### Cartographically-Rounded Depth (Affected Charts):

0 ½fm (16708\_1, 16700\_1, 16013\_1)

0fm 4ft (16707\_1, 531\_1)

-1.2m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)

### Office Notes

Do not concur. Portray ledge as rock based on chart scale.

## 1.6) 2240321

### Survey Summary

**Survey Position:** 061° 01' 20.638" N, 146° 35' 11.053" W  
**Least Depth:** -0.07 m  
**Timestamp:** 2003-240.16:41:00.000 (08/28/2003)  
**DP Dataset:** h11267 / r2ne\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 6/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

CFF rk is swm ext new ldg

### Hydrographer Recommendations

Chart swm extent of new ledge.

#### Cartographically-Rounded Depth (Affected Charts):

0fm (16708\_1, 16700\_1, 16013\_1)

0fm 0ft (16707\_1, 531\_1)

-.1m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)

### Office Notes

Do not concur. Retain charted rock to portray ledge at chart scale.

## 1.7) 2240356

### Survey Summary

**Survey Position:** 061° 00' 54.523" N, 146° 33' 47.906" W  
**Least Depth:** -2.43 m  
**Timestamp:** 2003-240.17:02:14.000 (08/28/2003)  
**DP Dataset:** h11267 / r2ne\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 8/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

CFF rk is swm ext chd (16707) ldg

### Hydrographer Recommendations

Retain charted (16707) ledge.

#### Cartographically-Rounded Depth (Affected Charts):

-1 ¼fm (16708\_1, 16700\_1, 16013\_1)  
-1fm 2ft (16707\_1, 531\_1)  
-2.5m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)

### Office Notes

Concur. Chart ledge as shown on SS.

## 1.8) 2240516

### Survey Summary

**Survey Position:** 061° 01' 47.975" N, 146° 35' 05.012" W  
**Least Depth:** -1.30 m  
**Timestamp:** 2003-240.18:10:25.000 (08/28/2003)  
**DP Dataset:** h11267 / r2ne\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 12/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

Chd (16707) rk is ext new ldg

### Hydrographer Recommendations

Chart new ledge.

#### Cartographically-Rounded Depth (Affected Charts):

0 ¾fm (16708\_1, 16700\_1, 16013\_1)

0fm 4ft (16707\_1, 531\_1)

-1.3m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Underwater rock / awash rock (UWTROC)

**Attributes:** VALSOU - -1.30 m

### Office Notes

Do not concur. Retain charted rocks to portray ledge at chart scale.

## 1.9) 2240518

### Survey Summary

**Survey Position:** 061° 02' 19.332" N, 146° 36' 50.372" W  
**Least Depth:** -5.23 m  
**Timestamp:** 2003-240.18:55:16.000 (08/28/2003)  
**DP Dataset:** h11267 / r2ne\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 14/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

CFF rks are hps new reef  
VBES buffer line is extent of new reef

### Hydrographer Recommendations

Chart as new reef. Remove charted (16707) islet.

#### Cartographically-Rounded Depth (Affected Charts):

-2 ¾fm (16708\_1, 16700\_1, 16013\_1)  
-2fm 5ft (16707\_1, 531\_1)  
-5.3m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Land elevation (LNDELV)  
**Geo object 2:** Underwater rock / awash rock (UWTROC)  
**Attributes:** VALSOU - -5.23 m

### Office Notes

Concur. Chart reef using survey information.

## 1.10) 2240520

### Survey Summary

**Survey Position:** 061° 02' 13.992" N, 146° 36' 36.036" W  
**Least Depth:** -5.83 m  
**Timestamp:** 2003-240.19:00:42.000 (08/28/2003)  
**DP Dataset:** h11267 / r2ne\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 15/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

CFF rk is chd (16707) islet

### Hydrographer Recommendations

Retain charted (16707) islet.

#### Cartographically-Rounded Depth (Affected Charts):

-3 ¼fm (16708\_1, 16700\_1, 16013\_1)  
-3fm 1ft (16707\_1, 531\_1)  
-5.9m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Land elevation (LNDELV)

### Office Notes

Concur.

## 1.11) 2240586

### Survey Summary

**Survey Position:** 061° 00' 15.103" N, 146° 31' 10.467" W  
**Least Depth:** -4.40 m  
**Timestamp:** 2003-240.20:38:35.000 (08/28/2003)  
**DP Dataset:** h11267 / r2ne\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 16/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

CFF rk is new ext MHW

### Hydrographer Recommendations

Extend MHW.

#### Cartographically-Rounded Depth (Affected Charts):

-2 ¼fm (16708\_1, 16700\_1, 16013\_1)  
-2fm 2ft (16707\_1, 531\_1)  
-4.4m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Land elevation (LNDELV)

### Office Notes

Concur. Chart using smoothsheet information.

## 1.12) 2240425

### Survey Summary

**Survey Position:** 061° 00' 08.285" N, 146° 30' 47.675" W  
**Least Depth:** 12.64 m  
**Timestamp:** 2003-240.17:32:00.000 (08/28/2003)  
**DP Dataset:** h11267 / r2es\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 2/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

Chd (16707) rk disproval

Charted (16707) rock at position 61°00'08.45" N, 146°30'48.23" W; (526316.27E, 6763146.40N) and DP#2240425 was disproved visually during shoreline verification by Hydrographer, 125m search radius, 3 min HW VBES star pattern search with 1m visibility and calm seas.

### Hydrographer Recommendations

Remove charted (16707) rock.

#### Cartographically-Rounded Depth (Affected Charts):

6 ¾fm (16708\_1, 16700\_1, 16013\_1)

6fm 5ft (16707\_1, 531\_1)

12.6m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)

### Office Notes

Concur.



## 1.13) 2240400

### Survey Summary

**Survey Position:** 061° 00' 28.426" N, 146° 31' 54.686" W  
**Least Depth:** 12.33 m  
**Timestamp:** 2003-240.17:25:07.000 (08/28/2003)  
**DP Dataset:** h11267 / r2es\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 1/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

Chd (16707) rk disproval

Charted (16707) rock at position 61°00'28.73" N, 146°31'54.63" W; (525314.16E, 6763766.66N) and DP#2240400 was disproved visually during shoreline verification by Hydrographer, 50% SWMB with 1m visibility and calm seas.

### Hydrographer Recommendations

Remove charted (16707) rock.

#### Cartographically-Rounded Depth (Affected Charts):

6 ¾fm (16708\_1, 16700\_1, 16013\_1)

6fm 4ft (16707\_1, 531\_1)

12.3m (500\_1, 50\_1)

### S-57 Data

[None]

### Office Notes

Concur.

## 1.14) 2240522

### Survey Summary

**Survey Position:** 061° 01' 28.882" N, 146° 36' 03.550" W  
**Least Depth:** 2.03 m  
**Timestamp:** 2003-240.19:10:54.000 (08/28/2003)  
**DP Dataset:** h11267 / r2es\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 3/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

**Remarks:**

CFF rk OK

### Hydrographer Recommendations

Chart CFF rk.

**Cartographically-Rounded Depth (Affected Charts):**

1fm (16708\_1, 16700\_1, 16013\_1)

1fm 0ft (16707\_1, 531\_1)

2.0m (500\_1, 50\_1)

### S-57 Data

[None]

### Office Notes

Concur.

## 1.15) 2240583

### Survey Summary

**Survey Position:** 061° 00' 11.332" N, 146° 30' 58.913" W  
**Least Depth:** 10.32 m  
**Timestamp:** 2003-240.20:34:59.000 (08/28/2003)  
**DP Dataset:** h11267 / r2es\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 7/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

Chd (16707) rk disproval

Charted (16707) rock at position 61°00'11.66" N, 146°30'59.25" W; (526152.82E, 6763244.75N) and DP#2240583 was disproved visually during shoreline verification by Hydrographer, 100m search radius, 3 min HW VBES search with 1m visibility and calm seas. 50% SWMB coverage.

### Hydrographer Recommendations

Remove charted (16707) rock.

#### Cartographically-Rounded Depth (Affected Charts):

5 ½fm (16708\_1, 16700\_1, 16013\_1)

5fm 4ft (16707\_1, 531\_1)

10.3m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)

### Office Notes

Concur.

## 1.16) 2240592

### Survey Summary

**Survey Position:** 061° 00' 16.470" N, 146° 31' 14.339" W  
**Least Depth:** 15.35 m  
**Timestamp:** 2003-240.20:43:17.000 (08/28/2003)  
**DP Dataset:** h11267 / r2es\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 8/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

Chd (16707) rk disproval

Charted (16707) rock at position 61°00'16.77" N, 146°31'14.73" W; (525916.19E, 6763400.98N) and DP#2240592 was disproved visually during shoreline verification by Hydrographer, 100m search radius, 3 min HW VBES star pattern search with 1m visibility and calm seas.

### Hydrographer Recommendations

Remove charted (16707) rock.

#### Cartographically-Rounded Depth (Affected Charts):

8 ¼fm (16708\_1, 16700\_1, 16013\_1)

8fm 2ft (16707\_1, 531\_1)

15.3m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)

### Office Notes

Concur.

**1.17) 2240546****Survey Summary**

**Survey Position:** 061° 01' 08.001" N, 146° 34' 30.632" W  
**Least Depth:** 18.85 m  
**Timestamp:** 2003-240.19:29:02.000 (08/28/2003)  
**DP Dataset:** h11267 / r2es\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 5/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

**Remarks:**

Chd (16707) rk disproval

Charted (16707) rock at position 61°01'08.26" N 146°34'30.93" W; (522958.72 , 6764973.65) and DP#2240546 was Disproved visually during shoreline verification by Hydrographer, 50m search radius, 5 min HW VBES search with 1m visibility and calm seas. 100% SWMB coverage.

**Hydrographer Recommendations**

Remove charted (16707) rock.

**Cartographically-Rounded Depth (Affected Charts):**

10 ¼fm (16708\_1, 16700\_1, 16013\_1)

10fm 2ft (16707\_1, 531\_1)

18.8m (500\_1, 50\_1)

**S-57 Data**

**Geo object 1:** Underwater rock / awash rock (UWTROC)

**Attributes:** VALSOU - 18.85 m

**Office Notes**

Concur.

**1.18) 2240537****Survey Summary**

**Survey Position:** 061° 01' 04.663" N, 146° 34' 27.883" W  
**Least Depth:** 10.51 m  
**Timestamp:** 2003-240.19:25:59.000 (08/28/2003)  
**DP Dataset:** h11267 / r2es\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 4/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

**Remarks:**

Chd (16707) rk disproval

Charted (16707) rock at position 61°01'04.92" N, 146°34'28.18" W; (523000.23E, 6764874.22N) and DP#2240537 was disproved visually during shoreline verification by Hydrographer, 50m search radius, 5 min HW VBES search with 1m visibility and calm seas. 75% SWMB coverage.

**Hydrographer Recommendations**

Remove charted (16707) rock.

**Cartographically-Rounded Depth (Affected Charts):**

5 ¾fm (16708\_1, 16700\_1, 16013\_1)

5fm 4ft (16707\_1, 531\_1)

10.5m (500\_1, 50\_1)

**S-57 Data**

**Geo object 1:** Cartographic symbol (\$CSYMB)

**Office Notes**

Concur.

## 1.19) 2240569

### Survey Summary

**Survey Position:** 061° 00' 25.629" N, 146° 31' 47.463" W  
**Least Depth:** 18.83 m  
**Timestamp:** 2003-240.19:47:14.000 (08/28/2003)  
**DP Dataset:** h11267 / r2es\_2003 / 2003-240 / dp2240  
**Profile/Beam:** 6/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

Chd (16707) rk disproval

Charted (16707) rock at position 61°00'25.9" N, 146°31'47.87" W; (525415.29E, 6763681.50N) and DP#2240569 was disproved visually during shoreline verification by Hydrographer, 50m search radius, 3 min HW VBES star pattern search with 1m visibility and calm seas. 50% SWMB coverage.

### Hydrographer Recommendations

Remove charted (16707) rock.

#### Cartographically-Rounded Depth (Affected Charts):

10 ¼fm (16708\_1, 16700\_1, 16013\_1)

10fm 2ft (16707\_1, 531\_1)

18.8m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)

### Office Notes

Concur.

## 1.20) 2241617

### Survey Summary

**Survey Position:** 061° 01' 56.309" N, 146° 35' 14.377" W  
**Least Depth:** -1.47 m  
**Timestamp:** 2003-241.15:40:58.000 (08/29/2003)  
**DP Dataset:** h11267 / r2ne\_2003 / 2003-241 / dp2241  
**Profile/Beam:** 1/1  
**Charts Affected:** 16707\_1, 16708\_1, 16700\_1, 16013\_1, 531\_1, 500\_1, 50\_1

#### Remarks:

CFF rk is hp swm ext new ldg

### Hydrographer Recommendations

Chart extent of new ledge.

#### Cartographically-Rounded Depth (Affected Charts):

0 ¾fm (16708\_1, 16700\_1, 16013\_1)

0fm 5ft (16707\_1, 531\_1)

-1.5m (500\_1, 50\_1)

### S-57 Data

**Geo object 1:** Cartographic symbol (\$CSYMB)

### Office Notes

Concur. Chart rock to portray ledge at chart scale.





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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: October 31, 2003

HYDROGRAPHIC BRANCH: Pacific  
HYDROGRAPHIC PROJECT: OPR-P151-RA-2003  
HYDROGRAPHIC SHEET: H11267

LOCALITY: Jack Bay, AK  
TIME PERIOD: August 20-29, 2003

TIDE STATION USED: 945-4240 Valdez, Alaska  
Lat. 61° 07.5'N Lon. 146° 21.8'W  
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters  
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 3.417 meters

REMARKS: RECOMMENDED ZONING  
Use zone(s) identified as: PWS67.

Refer to attachments for zoning information.

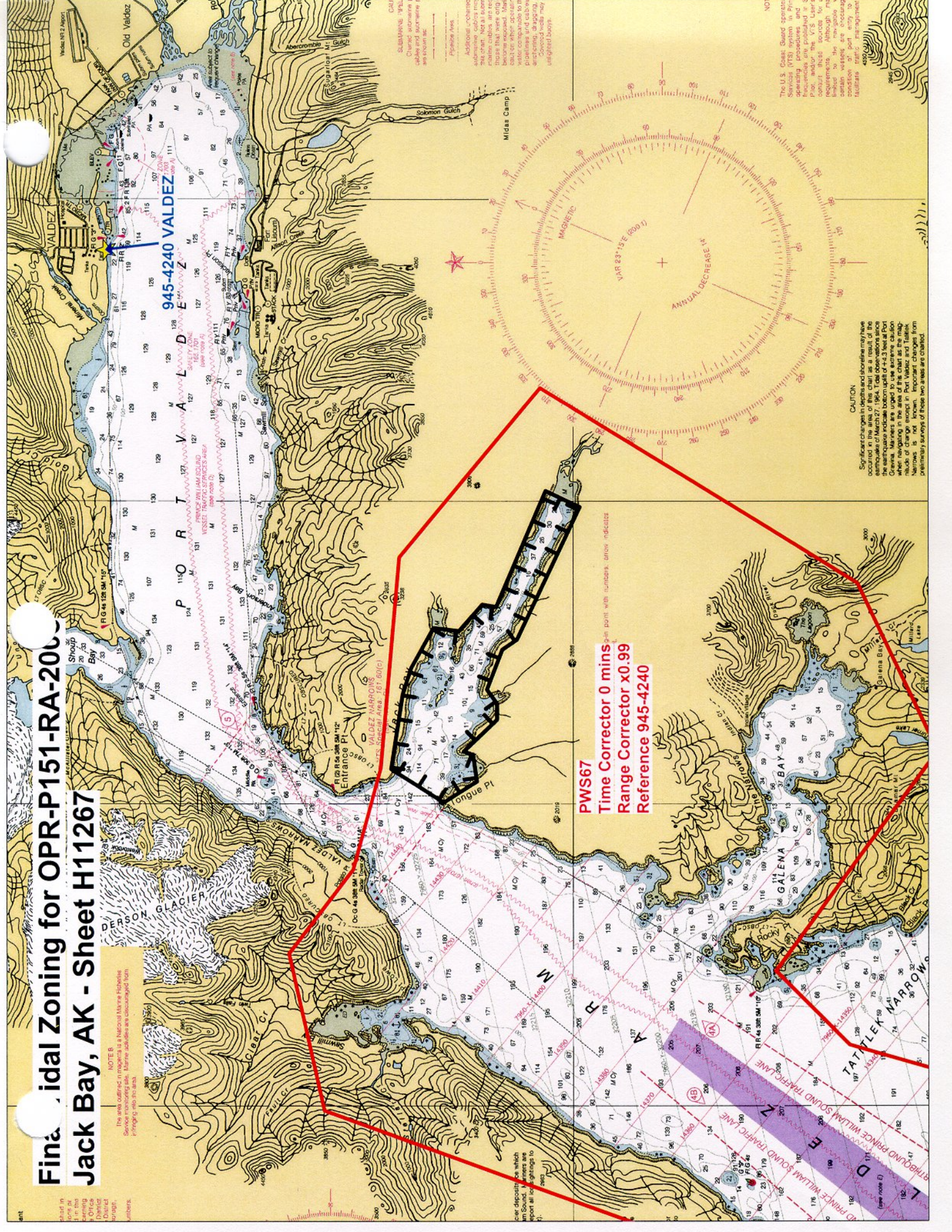
Note 1: Provided time series data are tabulated in metric units  
(meters), relative to MLLW and on Greenwich Mean Time.

*Thomas V. Mero 11/4/03*  
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CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION



# Final Tidal Zoning for OPR-P151-RA-2000 Jack Bay, AK - Sheet H11267

**NOTE 6**  
The red outlined polygons are a National Marine Fisheries Service monitoring site. Marine activities are discouraged from intruding into the area.



**PWS67**  
Time Corrector 0 mins  
Range Corrector x0.99  
Reference 945-4240

**945-4240 VALDEZ**  
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**CAUTION**  
Sea-floor changes in depths and shorelines may have occurred since the last hydrographic survey of the area. The U.S. Coast Guard's Survey of the Coast (SOTC) system is the primary source of information on these changes. Mariners are urged to use extreme caution in these areas. The U.S. Coast Guard's Survey of the Coast (SOTC) system is the primary source of information on these changes. The U.S. Coast Guard's Survey of the Coast (SOTC) system is the primary source of information on these changes.

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**Final tide zone node point locations for OPR-P151-RA-2003, Sheet 11267**

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

	Tide Station Order	AVG Time Correction	Range Correction
Zone PWS67	945-4240	0	0.99
-147.1433 60.855198			
-147.025646 60.885186			
-146.948102 60.925559			
-146.928717 60.942475			
-146.835761 61.066624			
-146.749176 61.076016			
-146.702896 61.058932			
-146.646956 61.051538			
-146.530774 61.046579			
-146.437727 61.00896			
-146.544989 60.924153			
-146.637467 60.902731			
-146.758827 60.946173			
-146.799509 60.926378			
-146.818153 60.895011			
-146.793773 60.859141			
-146.732848 60.815648			
-147.1433 60.855198			

APPROVAL SHEET  
H11267

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 Olmstead

Date: 7/12/2007

Bruce Olmstead  
Cartographer, 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.

[Signature]  
, CDR/NOAA

Date: 24 JULY 2007

Donald W. Haines  
CDR, NOAA  
Chief, Pacific Hydrographic Branch

