

H11181

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-10-10-03**

Registry No. **H-11181**

LOCALITY

State **Alaska**

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

Sublocality **Western Port Valdez**

.....
2003
.....

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

LIBRARY & ARCHIVES

DATE

HYDROGRAPHIC TITLE SHEET

H-11181

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 10-10-03

State Alaska

General Locality Approaches to Port Valdez and Valdez Harbor

Sublocality Western Port Valdez

Scale 1:10,000

Date of Survey 8/20/2003 - 8/29/2003

Instructions Date 8/28/2003

Project No. OPR-P151-RA-03

Vessel RA-1 (1101), RA-2 (1103), RA-5(1006), RA-6 (1015)

Chief of Party CDR John W. Humphrey, NOAA

Surveyed by Ship personnel and physical scientists from Pacific & Atlantic
Hydrographic Branches

Soundings taken by echo sounder, hand lead, pole Knudson 320 M, Reson SeaBat 8101

Graphic record scaled by RAINIER PERSONNEL

Graphic record checked by RAINIER PERSONNEL

Evaluation by R. Shipley Automated plot by HP Design Jet 1050C

Verification by E. Domingo, R. Shipley

Soundings in Fathoms at MLLW

REMARKS: All times are 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.**

UTM Projection (zone 6).

Descriptive Report to Accompany Hydrographic Survey H11181

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 the western portion of Port Valdez, on the northern side of Prince William Sound. This survey corresponds to sheet "B" 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 was acquired in depths from 4 to 20 meters to define the four-meter curve and to aid in the planning of SWMB data acquisition.¹

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

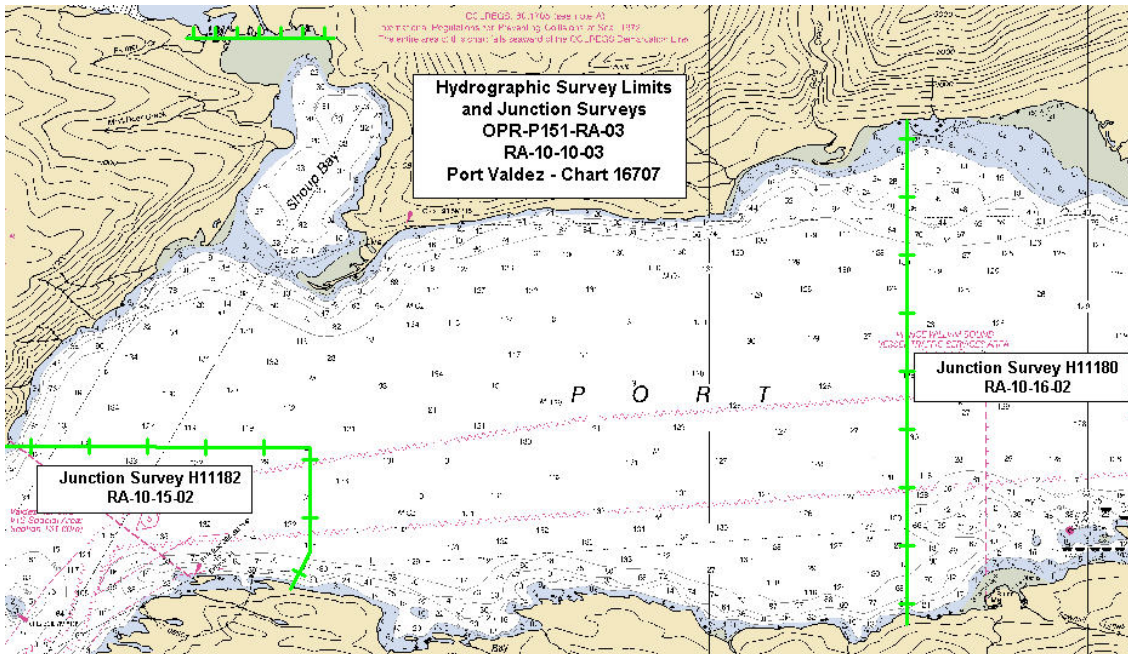


Figure 1. H11181 Survey Limits.

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)*,² 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 was acquired by RAINIER's survey launches RA1, RA2, RA5, RA6. Vessels RA5, & 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.³

B2. Quality Control

Crosslines

Vertical Beam Echo Sounder (VBES) crosslines including buffer lines totaled 20.2 nautical miles, comprising 52% of VBES hydrography. Crosslines generally agreed within 1 meter of mainscheme hydrography.

Shallow-Water Multibeam (SWMB) crosslines totaled 11.06 nautical miles, comprising 5% of SWMB hydrography. The mainscheme bathymetry was manually compared to the crossline nadir beams in CARIS subset mode and agreed well with differences averaging approximately 0.5 – 1.0 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.⁴

Through manual examination of the data and statistical analysis of data accuracy standards for this survey have been met.

Junctions

The following contemporary survey junctions with H11181:

<u>Registry #</u>	<u>Scale</u>	<u>Date</u>	<u>Junction side</u>
H11180	1:10,000	2002	East
H11182	1:10,000	2002	Southwest

Junction survey comparisons were not made with surveys H11180 or H11182. Junction data was not provided with the project instructions for OPR-P151-RA-03.

Final comparisons will be made at the Pacific Hydrographic Branch (PHB) after the application of smooth tides.⁵

See Figure 1 for junction survey diagram.

Data Quality Factors

Due to melting glacial ice and river runoff, 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 and Sips, many lines still exhibited the characteristic "frowns" indicative of inaccurate sound velocity corrections. To compensate for these sound velocity problems, survey lines were spaced closer together, effectively narrowing swath width. Soundings in the outermost beams were most frequently rejected. In order to fully compensate for the sound velocity issues in Port Valdez, continuous sound velocity profiling would need to be employed.⁶

B3. Data Reduction

Data reduction procedures for survey H11181 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 H11181 can be found in the *OPR-P151-RA-03 Horizontal and Vertical Control Report*,⁷ 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 beacon at Potato Point (298 kHz) were utilized during this survey. Launch-to-launch DGPS performance checks using U.S. Coast Guard beacon Cape Hinchinbrook (292 kHz) as the check station 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 H11181.

No tertiary gauges were required.

All data was 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 H11181 was forwarded to N/OPS1 on September 5, 2003.⁸ A copy of the request is included in Appendix IV.

D. RESULTS AND RECOMMENDATIONS

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

There were no AWOIS items located within the limits of H11181.⁹

D.2 Chart Comparison

Survey H11181 was compared with charts 16707 (10th Ed.; Sept. 29, 2001, 1:40,000) and 16708 (25th Ed.; Oct. 6, 2001, 1:79,291).

Chart 16707

Depths from survey H11181 generally agreed with charted depths within one or two fathoms in open water. In some instances, the survey found shoaler soundings than what was charted near shore. This can be attributed to increased bottom coverage using SWMB methods.¹⁰

Chart 16708

Depths from survey H11181 generally agreed with charted depths within one or two fathoms in open water. In some instances, the survey found shoaler soundings than what was charted near shore. This can be attributed to increased bottom coverage using SWMB methods.

The Hydrographer has determined that data accuracy standards and bottom coverage requirements have been met and survey data is 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.

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 edition of chart 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*.¹¹

A detailed Detached Position and Bottom Sample (DPBS) plot¹², 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 H11181_CFF_Shoreline and shown in black. New MHW features and changes to the MHW shoreline, CFF or charted, are displayed in red on the “H11181_ShorelineUpdates” MapInfo table. Charted shoreline, when used for reference purposes or when source data was not available, is depicted in the MapInfo table “H11181_Charted_Shoreline.” and displayed in brown.

Shoreline Changes and New Features

Items for survey H11181, both source and charted, requiring further discussion and associated with a detached position have been flagged “Report” in Pydro in H11181.pss. Investigation/survey methods and recommendations are listed in the Remarks and Recommendation tabs. A report with these items was generated, H11181_Shoreline_Report.pdf,¹³ and is located in the supplemental correspondence section of the descriptive report appendices, included in the digital data.

The CFF shoreline at position 61°07'27.6" N 146°32'15.41" W¹⁴ (523000.36E , 6777294.08N) was rejected in favor of the charted (16707) shoreline. During shoreline verification it was noted that the charted islet exists and is connected to the shore. The Hydrographer recommends the use of the charted (16707) shoreline in lieu of the CFF shoreline as it more accurately represents the actual shoreline.¹⁵

The charted (16707) rock at position 61°06'37.16" N 146°38'26.73" W (519361.44E , 6775129.87N) was not seen during shoreline verification. Due to the failure of the Hydrographer to collect sufficient data while at the project location to disprove the rock, the Hydrographer recommends retaining the charted (16707) rock.¹⁶

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. 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 “H11181_ShorelineNotes.”

D.4 Dangers to Navigation

There were no Dangers to Navigation found on this survey.¹⁷

D.5 Aids to Navigation

One aid to navigation (ATON) was within the limits of survey H11181. The lighted green daymark #15 (LL# 25740) was found to be correctly charted and serve its intended purpose.¹⁸

D.6 Miscellaneous

Six bottom samples were collected and are depicted on the Detached Position and Bottom Sample Plot, one historical (chart 16707) and five new. The historical bottom sample does not agree with the charted bottom sample.¹⁹ Historical bottom samples from chart 16708 were not verified due to their location in over 120 fathoms of water.

In February 2004, RAINIER was informed of a bug in the CARIS Singlebeam Editor 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 H11181, copying the SLRange, SLRangeLineSegments, SLRangeTmIdx files into the original processed line file folders, and re-merging the lines, the errors caused by this bug were removed. A comparison of the reconverted and original data in Mapinfo found very few differences. Twenty-seven soundings from the survey had a variance greater than 0.01 meters. The soundings were from vessel RA2, day 232, and on the following lines:

320_1637
322_1639
323_1642
324_1644
325_1647
326_1649
327_1651
328_1653
329_1654
330_1656
331_1658

The submitted HDCS_DATA for this survey includes the corrected VBES depths and meets NOS Hydrographic Survey Specifications and Deliverables.

E. APPROVAL

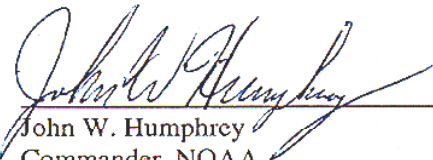
As Chief of Party, I have ensured that standard field surveying and processing procedures were followed in producing this survey in accordance with the Hydrographic Manual, Fourth Edition, Hydrographic Survey Guidelines, Field Procedures Manual and the NOS Hydrographic Surveys Specifications and Deliverables,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

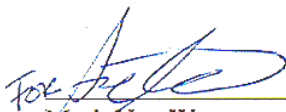
Survey H11181 is complete and adequate to supersede charted soundings²⁰ in their common areas. No additional work is required for this survey.

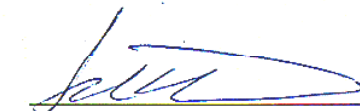
Listed below are supplemental reports submitted separately that contain additional information relevant to this survey:

<u>Title</u>	<u>Date Sent</u>	<u>Office</u>
Data Acquisition and Processing Report for OPR-P151-RA-03	4/30/04	N/CS34
Horizontal and Vertical Control Report for OPR-P151-RA-03	4/15/04	N/CS34
Coast Pilot Report for OPR-P151-RA-03	TBD ²¹	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: 
 Mark Van Waes
 Lieutenant (junior grade), NOAA

Field Operations Officer: 
 Stephanie A. Koes
 Lieutenant (junior grade), NOAA

Revisions Compiled During Office Processing and Certification

¹ Concur.

² Filed with the Project Records.

³ Concur.

⁴ Do not concur. A PHB review of the data demonstrated the survey meets IHO Order 1 specifications in depths less than 100 meters. In depth greater than 100 meters the survey meets IHO Order 2 specifications. The survey is adequate to supersede all prior surveys within the common area.

⁵ Comparisons with H11180 and H11182 results in good agreement within the junctions.

⁶ Concur.

⁷ Filed with the Project Records.

⁸ Approved Tide Note dated October 31, 2003 is attached.

⁹ Concur.

¹⁰ Concur.

¹¹ Filed with Hydrographic Records.

¹² Filed with Hydrographic Records.

¹³ Attached to this report.

¹⁴ Strike ~~61°07'27.6" N 146°32'15.41" W~~ and inset 61°07'46.4" N 146°34'22.8" W

¹⁵ Concur. Chart as shown on the Hdrawing.

¹⁶ Concur.

¹⁷ Concur.

¹⁸ Chart with latest ATONIS information.

¹⁹ Concur with clarification. Some bottom samples were retained from Chart 16707. Chart bottoms samples as shown on the Hdrawing.

²⁰ Insert "and features"

²¹ PHB Revision--Strikethrough ~~TBD~~ and add 05/06/04

H1181 Shoreline Report

Registry Number: H1181
State: Alaska
Locality: Prince William Sound, Alaska
Sub-locality: Western Port Valdez
Project Number: OPR-P151-RA-03
Survey Dates: 8/20/2003 - 8/29/03

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	Rock	0.52 m	61.08268722° N	146.53262902° W	---
1.2	Sounding	6.93 m	61.07736731° N	146.56706350° W	---
1.3	Sounding	37.74 m	61.08144706° N	146.50254249° W	---
1.4	Sounding	3.27 m	61.08041247° N	146.50183317° W	---
1.5	Sounding	-1.77 m	61.10251042° N	146.65048214° W	---
1.6	Sounding	-4.28 m	61.13630931° N	146.59525703° W	---
1.7	Rock	-2.13 m	61.11157180° N	146.63840929° W	---
1.8	Sounding	10.19 m	61.07947683° N	146.46293409° W	---
1.9	Sounding	16.69 m	61.08041464° N	146.47412825° W	---

1 - New Features

1.1) Profile/Beam - 7/1 from H11181 / R2NE_2003 / 2003-239 / DP2239

Survey Summary

Survey Position: 61.08268722° N, 146.53262902° W
Least Depth: 0.52 m
Timestamp: 2003-239.17:10:36.000 (08/27/2003)
DP Dataset: H11181 / R2NE_2003 / 2003-239 / DP2239
Profile/Beam: 7/1
Charts Affected: 16707_1, 16708_1, 16700_1, 16013_1, 531_1, 500_1, 50_1
Remarks:
 CHD (16707) RK

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11181/R2NE_2003/2003-239/DP2239	7/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart rock in new position

Cartographically-Rounded Depth (Affected Charts):

0 ¼fm (16708_1, 16700_1, 16013_1)

0fm 1ft (16707_1, 531_1)

.5m (500_1, 50_1)

Office Notes

Concur

1.2) Profile/Beam - 1/1 from H11181 / R2ES_2003 / 2003-239 / DP2239

Survey Summary

Survey Position: 61.07736731° N, 146.56706350° W
Least Depth: 6.93 m
Timestamp: 2003-239.16:12:37.000 (08/27/2003)
DP Dataset: H11181 / R2ES_2003 / 2003-239 / DP2239
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

The charted (16707) rock was disproved during shoreline verification visually (10' visibility) and using VBES (50m star pattern, 5 min search) in calm seas.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11181/R2ES_2003/2003-239/DP2239	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted rock

Cartographically-Rounded Depth (Affected Charts):

3 ¾fm (16708_1, 16700_1, 16013_1)

3fm 4ft (16707_1, 531_1)

6.9m (500_1, 50_1)

Office Notes

Concur

1.3) Profile/Beam - 2/1 from H11181 / R2ES_2003 / 2003-239 / DP2239

Survey Summary

Survey Position: 61.08144706° N, 146.50254249° W
Least Depth: 37.74 m
Timestamp: 2003-239.17:32:45.000 (08/27/2003)
DP Dataset: H11181 / R2ES_2003 / 2003-239 / DP2239
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

The charted (16707) rock was disproved during shoreline verification visually (8' visibility), using VBES (50m star pattern, 7 min search), and 100% SWMB in calm seas.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11181/R2ES_2003/2003-239/DP2239	2/1	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted rock

Cartographically-Rounded Depth (Affected Charts):

20fm (16708_1, 16700_1, 16013_1)

20fm (16707_1, 531_1)

37m (500_1, 50_1)

Office Notes

Concur

1.4) Profile/Beam - 3/1 from H11181 / R2ES_2003 / 2003-239 / DP2239

Survey Summary

Survey Position: 61.08041247° N, 146.50183317° W
Least Depth: 3.27 m
Timestamp: 2003-239.17:40:38.000 (08/27/2003)
DP Dataset: H11181 / R2ES_2003 / 2003-239 / DP2239
Profile/Beam: 3/1
Charts Affected: 16707_1, 16708_1, 16700_1, 16013_1, 531_1, 500_1, 50_1

Remarks:

CHD (16707) RK DISPROVAL

The charted (16707) rock was disproved during shoreline verification visually (8' visibility), using VBES (grid pattern, 100m lines at 5-7m spacing, 7 min search), and partial SWMB in calm seas.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11181/R2ES_2003/2003-239/DP2239	3/1	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted rock

Cartographically-Rounded Depth (Affected Charts):

1 ¾fm (16708_1, 16700_1, 16013_1)

1fm 4ft (16707_1, 531_1)

3.2m (500_1, 50_1)

Office Notes

Concur

1.5) Profile/Beam - 4/1 from H11181 / R1NE_2003 / 2003-239 / DP1239

Survey Summary

Survey Position: 61.10251042° N, 146.65048214° W
Least Depth: -1.77 m
Timestamp: 2003-239.16:58:26.000 (08/27/2003)
DP Dataset: H11181 / R1NE_2003 / 2003-239 / DP1239
Profile/Beam: 4/1
Charts Affected: 16707_1, 16708_1, 16700_1, 16013_1, 531_1, 500_1, 50_1

Remarks:

CHD (16707) RK IS EXT CFF SHORELINE

During shoreline verification, the charted (16707) rock was found to be the extent of the CFF shoreline.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11181/R1NE_2003/2003-239/DP1239	4/1	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted rock

Cartographically-Rounded Depth (Affected Charts):

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

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

-1.8m (500_1, 50_1)

Office Notes

Concur

1.6) Profile/Beam - 6/1 from H11181 / R1NE_2003 / 2003-239 / DP1239

Survey Summary

Survey Position: 61.13630931° N, 146.59525703° W
Least Depth: -4.28 m
Timestamp: 2003-239.17:44:18.000 (08/27/2003)
DP Dataset: H11181 / R1NE_2003 / 2003-239 / DP1239
Profile/Beam: 6/1
Charts Affected: 16707_1, 16708_1, 16700_1, 16013_1, 531_1, 500_1, 50_1

Remarks:

CFF RK IS NEW EXT MHW

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11181/R1NE_2003/2003-239/DP1239	6/1	0.00	000.0	Primary

Hydrographer Recommendations

Remove CFF rock and chart MHW as depicted on DPBS plot.

Cartographically-Rounded Depth (Affected Charts):

-2 ¼fm (16708_1, 16700_1, 16013_1)

-2fm 2ft (16707_1, 531_1)

-4.3m (500_1, 50_1)

Office Notes

Concur

1.7) Profile/Beam - 1/1 from H11181 / R1NE_2003 / 2003-239 / DP1239

Survey Summary

Survey Position: 61.11157180° N, 146.63840929° W
Least Depth: -2.13 m
Timestamp: 2003-239.16:39:31.000 (08/27/2003)
DP Dataset: H11181 / R1NE_2003 / 2003-239 / DP1239
Profile/Beam: 1/1
Charts Affected: 16707_1, 16708_1, 16700_1, 16013_1, 531_1, 500_1, 50_1

Remarks:

CHD (16707) RK

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11181/R1NE_2003/2003-239/DP1239	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart rock in new position.

Cartographically-Rounded Depth (Affected Charts):

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

-1fm 1ft (16707_1, 531_1)

-2.2m (500_1, 50_1)

Office Notes

Concur

1.8) Profile/Beam - 1/1 from H11181 / R1ES_2003 / 2003-240 / DP1240

Survey Summary

Survey Position: 61.07947683° N, 146.46293409° W
Least Depth: 10.19 m
Timestamp: 2003-240.17:46:10.000 (08/28/2003)
DP Dataset: H11181 / R1ES_2003 / 2003-240 / DP1240
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

The charted (16707) rock was disproved during shoreline verification visually (6' visibility) and using VBES (grid pattern, 100m lines at 5-7m spacing, 10 min search).

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11181/R1ES_2003/2003-240/DP1240	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted rock

Cartographically-Rounded Depth (Affected Charts):

5 ½fm (16708_1, 16700_1, 16013_1)

5fm 3ft (16707_1, 531_1)

10.2m (500_1, 50_1)

Office Notes

Concur

1.9) Profile/Beam - 2/1 from H11181 / R1ES_2003 / 2003-240 / DP1240

Survey Summary

Survey Position: 61.08041464° N, 146.47412825° W
Least Depth: 16.69 m
Timestamp: 2003-240.17:58:57.000 (08/28/2003)
DP Dataset: H11181 / R1ES_2003 / 2003-240 / DP1240
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

The charted (16707) rock was disproved during shoreline verification visually (6' visibility) and using VBES (grid pattern, 100m lines at 5-7m spacing, 10 min search), and 100% SWMB coverage.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11181/R1ES_2003/2003-240/DP1240	2/1	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted rock

Cartographically-Rounded Depth (Affected Charts):

9fm (16708_1, 16700_1, 16013_1)

9fm 1ft (16707_1, 531_1)

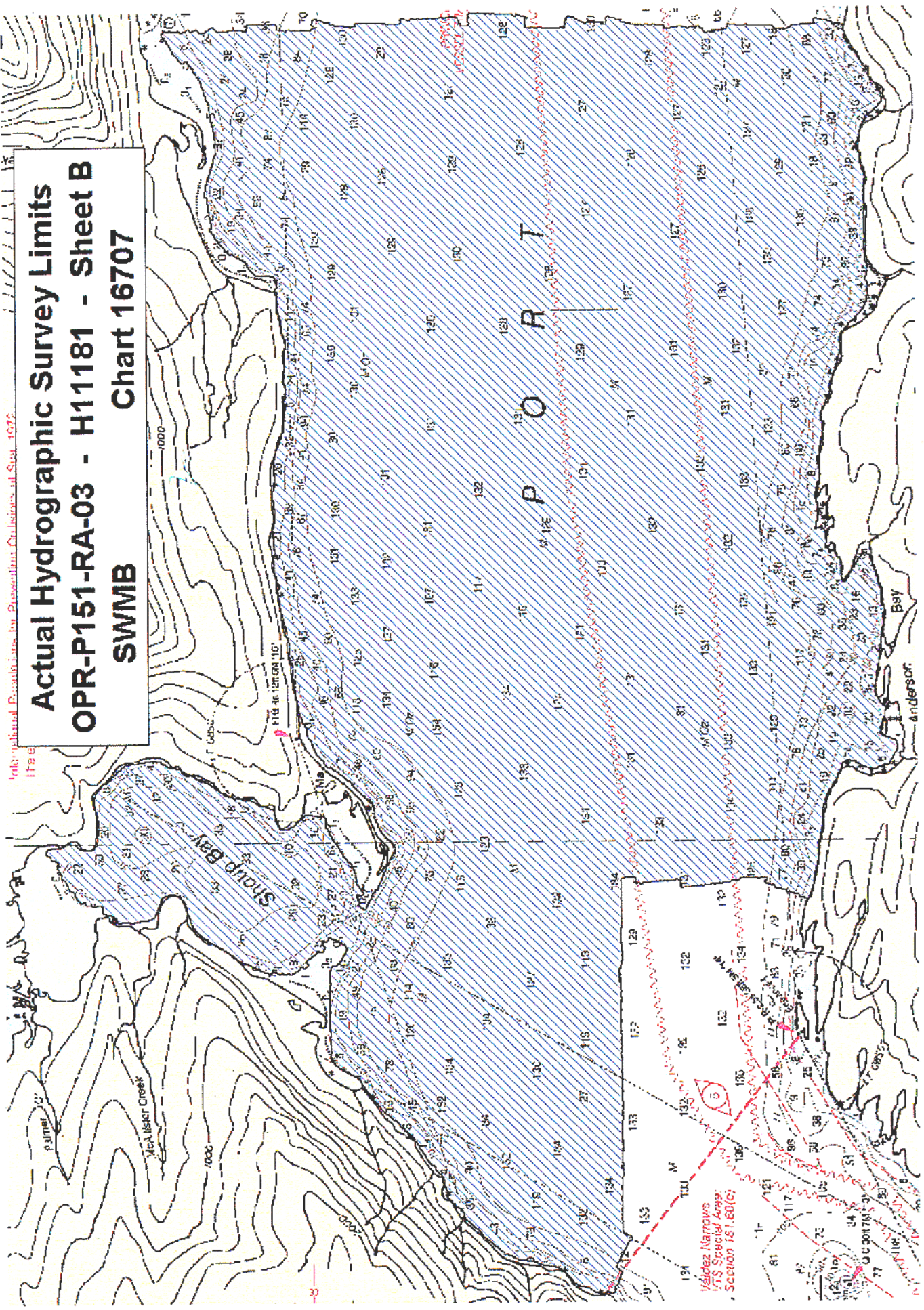
16.7m (500_1, 50_1)

Office Notes

Concur

Hydrographic Survey Limits for Presidential Proclamation of State, 1972

Actual Hydrographic Survey Limits OPR-P151-RA-03 - H11181 - Sheet B SWMB Chart 16707





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: H11181

LOCALITY: Western Port Valdez, 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: PWS68.

Refer to attachments for zoning information.

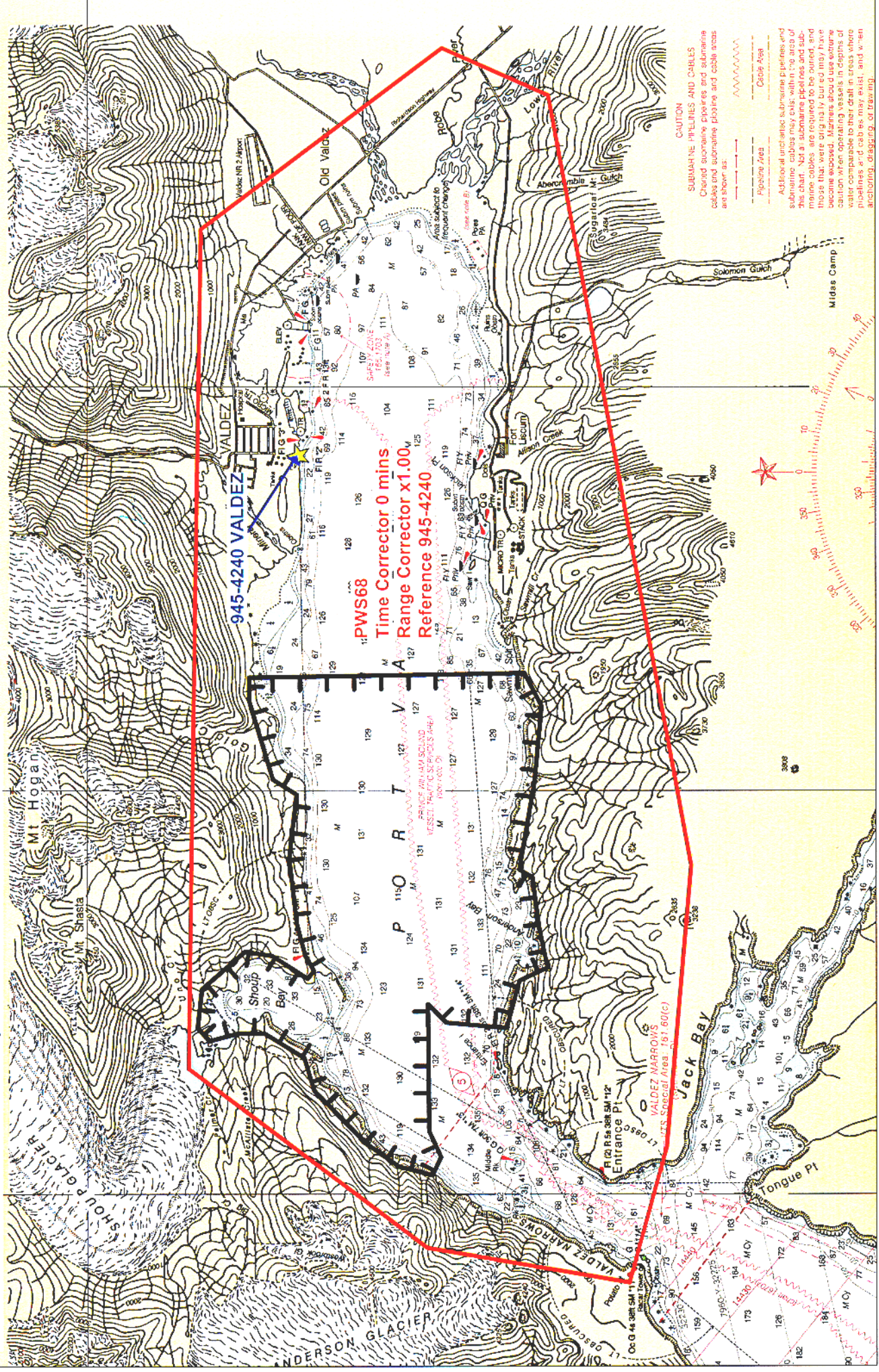
Note 1: Provided time series data are tabulated in metric units
(meters), relative to MLLW and on Greenwich Mean Time.

Thomas N. Mero 11/4/03

CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

Final Tidal Zoning for OPR-P151-RA-2003 Western Port Valdez, AK - Sheet H11181

25' 20' 15'



Final tide zone node point locations for OPR-P151-RA-2003, Sheet H11181.


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 PWS68	945-4240	0	1.00
-146.702896 61.058932			
-146.646956 61.051538			
-146.530774 61.046579			
-146.212863 61.074764			
-146.193478 61.096043			
-146.268432 61.14418			
-146.614604 61.146727			
-146.688437 61.099171			
-146.702896 61.058932			

APPROVAL SHEET
H-11181

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.



Date: 23 October 2006

Gary Nelson
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.



Date: 24 October 2006

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

