

H11120

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-10-03-03

Registry No. H-11120

LOCALITY

State Alaska

General Locality Sitka Sound

Sublocality Approaches to Sitka Harbor

2003

CHIEF OF PARTY

..... CAPT James C. Gardner, NOAA

LIBRARY & ARCHIVES

DATE

HYDROGRAPHIC TITLE SHEET

H11120

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-10-03-03

State Alaska

General Locality Sitka Sound

Sublocality Approaches to Sitka Harbor

Scale 1:10,000

Date of Survey 5/6/2003 - 6/26/2003

Instructions Date 4/21/2003

Project No. OPR-O112-RA-03

Vessel NOAA Ship launches 1006, 1015, 1016, 1101, 1103, 817

Chief of Party CAPT. James C. Gardner, NOAA

Surveyed by RAINIER Personnel

Soundings taken by echo sounder Knudsen 320M, Reson SeaBat 8101, 8125, Seabeam 1180

Graphic record scaled by RAINIER Personnel

Graphic record checked by RAINIER Personnel

Evaluation by R. Davies

Automated plot by HP Designjet 1050C

Verification by R. Davies, E. Domingo

Soundings in Fathoms and tenths

at

MLLW

REMARKS: Time in UTC. UTM Projection Zone 8

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

Descriptive Report to Accompany Hydrographic Survey H11120

Project OPR-O112-RA

Sitka Sound, Alaska

Scale 1:10,000

April-June 2003

NOAA Ship RAINIER

Chief of Party: Captain James C. Gardner, NOAA

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-O112-RA-03, dated April 21, 2003, and the Draft Standing Project Instructions dated March 21, 2001. The survey area covers the approaches to Sitka Harbor in Sitka Sound, Alaska. This survey corresponds to sheet "P" in the sheet layout provided with the Letter Instructions. ¹

One hundred percent shallow-water multibeam (SWMB) coverage was obtained in the survey area in waters 8 meters and deeper. In waters from 4 meters to 8 meters, 25 meter line spacing was maintained with additional coverage to obtain least depths over features or shoals. 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. ²

Data acquisition was conducted from May 06 to June 26, 2003 (DN 126 to 177).

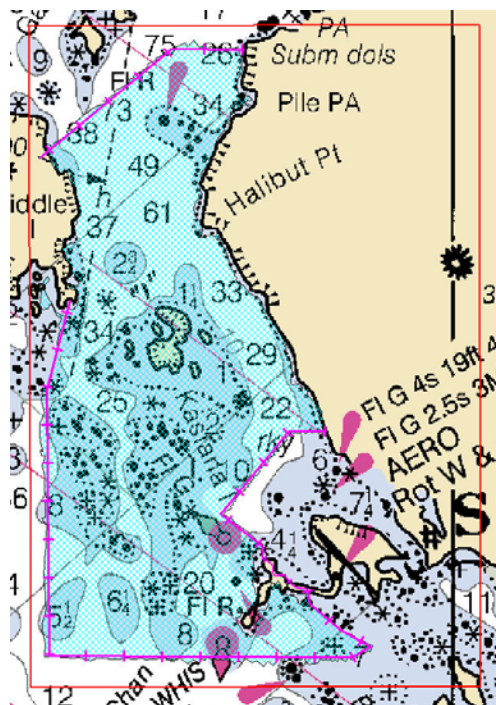


Figure 1. H11120 Survey Limits.

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-O112-RA-03 Data Acquisition and Processing Report* (DAPR), submitted under separate cover.³ 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, RA4, RA5, RA6 and RA7. Vessels RA4 & RA5, were used to acquire shallow-water multibeam (SWMB) soundings and sound velocity profiles. Vessels RA1, RA2, and RA7 were used to acquire vertical-beam echo soundings (VBES) and detached positions (DPs) for shoreline verification. Vessel RA6 was used to collect bottom samples.

All launches commonly utilized to collect detached positions (RA1, RA2 & RA7) each have two separate CARIS Vessel Configuration Files (VCFs) associated with them to cover all possible data collection conditions. In addition, R5NE_2003 was used to acquire detached positions and R6NE_2003 was used to acquire bottom samples. The “SB” VCFs (ex: R1SB_2003) contain all offset and dynamic draft correctors and are applied to single beam hydrography and to all echo sounder detached positions. The “NE” VCFs (ex: R1NE_2003) are simply zeroed out VCFs that are applied to all non echo sounder detached positions. Detached positions, both echo sounder and non echo sounder, have all sensor offsets applied in Pydro. All single beam data have sensor offsets and dynamic draft applied in CARIS during post-processing.

No other unusual vessel configurations were used for data acquisition.⁴

B2. Quality Control

Crosslines

Vertical Beam Echo Sounder (VBES) crosslines including buffer lines totaled 52.52 nautical miles, comprising 13.47% of mainscheme hydrography. Crosslines generally agreed within 1 meter of mainscheme hydrography.

Shallow-Water Multibeam (SWMB) crosslines totaled 30.5 nautical miles, comprising 7.8% 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 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-O112-RA-03 DAPR*. All systems collect data that meet IHO order 2 specifications.⁵

The Hydrographer believes through manual examination of the data,⁶ accuracy standards have been met.⁷

Junctions

The following contemporary surveys junction with H11120:⁸

Registry #	Scale	Date	Junction side
H11117	1:10,000	2003	North
H11121	1:5,000	2002	Southeast

Survey H11117 junctions well with this survey, a cursory comparison indicates differences are generally less than one meter.⁹

Survey H11121 junctions well with this survey, a cursory comparison indicates differences are generally less than one meter.¹⁰

Final comparisons will be made at the Pacific Hydrographic Branch (PHB) after the application of smooth tides.¹¹

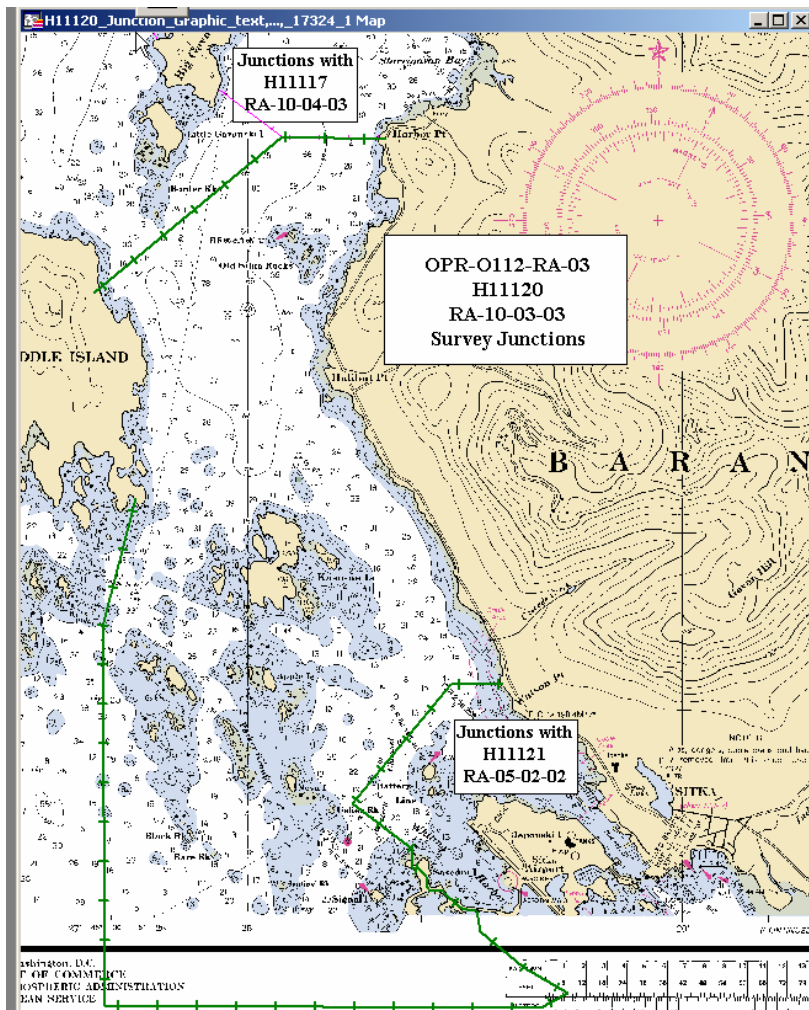


Figure 2. H11120 Junction Surveys.

Data Quality Factors

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

B3. Data Reduction

Data reduction procedures for survey H11120 conform to those detailed in the *OPR-O112-RA-03 DAPR*.

C. VERTICAL AND HORIZONTAL CONTROL

A complete description of vertical and horizontal control for survey H11120 can be found in the *OPR-O112-RA-03 Horizontal and Vertical Control Report*, ¹² 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 Biorka Island (305 kHz) were utilized during this survey. Launch-to-launch DGPS performance checks using U.S. Coast Guard beacon Level Island (295 kHz) or Gustavus (288 kHz) as the check station were performed weekly in accordance with Section 3.2 of the FPM. Copies of the performance checks are included in the *OPR-O112-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 Sitka, AK (945-1600) served as control for datum determination and as the primary source for water level reducers for survey H11120.

RAINIER personnel installed Sutron 8210 “bubbler” tide gauges at the following subordinate stations to provide information for N/OPS1 to determine time and height correctors in accordance with the Project Instructions:

Station Name	Station Number	Type of Gauge	Date of Installation	Date of Removal
Scraggy Island	945-1805	3-day	April 21, 2003	June 23, 2003
Golf Island	945-1421	30-day	May 8, 2003	June 27, 2003

All data were reduced to MLLW using unverified observed tides from station Sitka, AK using the tide file 9451600.tid and time and height correctors using the zone corrector file 0112RA2003CORP.zdf.

The Pacific Hydrographic Branch will apply final approved (smooth) tides to the survey data during final processing.¹³ A request for delivery of final approved (smooth) tides for survey H11120 was forwarded to N/OPS1 on June 12, 2003. A copy of the request is included with this report.¹⁴

D. RESULTS AND RECOMMENDATIONS

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

No AWOIS Items were located within the limits of H11120.¹⁵

D.2 Chart Comparison

Survey H11120 was compared with following charts:¹⁶

17324 (13th Ed.; March 25, 1989, 1:40,000)¹⁷

17327 (21st Ed.; August, 2003, 1:10,000)¹⁸

Chart 17324

Depths from survey H11120 were generally one to two fathoms shoaler than depths on chart 17324. In many instances, this survey found shoaler soundings between charted soundings even though agreement at the position of the charted depths was good. This can be attributed to increased bottom coverage using SWMB methods.¹⁹

Chart 17327

Depths from survey H11120 were generally two fathoms shoaler than depths on chart 17327 in depths of greater than 10 fathoms. In areas where depths were less than 10 fathoms, surveyed depths were generally the same or one fathom shoaler than those on the chart. In many instances, this survey found shoaler soundings between charted soundings even though agreement at the position of the charted depths was good. This can be attributed to increased bottom coverage using SWMB methods.²⁰

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.²¹

Final chart comparisons will be made at the Pacific Hydrographic Branch after the application of smooth tides.²²

D.3 Shoreline

Shoreline Source

Vector photogrammetric projects AK9703A, AK9703B, and AK902A were supplied by N/NGS3 in the form of cartographic feature files (CFF). RAINIER conducted limited

shoreline verification of the CFF. In the absence of CFF MHW or CFF MLLW RAINIER personnel digitized the largest scale charts in MapInfo. In addition, features shown on the current editions of charts 17324 and 17327 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 and 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*.

A detailed Detached Position and Bottom Sample plot²³ 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 “H11120_CFF_Shoreline” and shown in black. New MHW features and changes to the MHW shoreline, CFF or charted, are displayed in red on the “H11120_Shoreline_Updates” Mapinfo table. New or changes to MLLW, ledges/reefs and foul areas are displayed in pink, and are also in the “H11120_Shoreline_Updates” table. Charted shoreline, when used for reference purposes or when source data were not available, is depicted in the MapInfo table “H11120_Charted_Shoreline” and displayed in brown.²⁴

Preliminary Topographic LIDAR was provided by RSD for reference purposes to evaluate applications for hydrographic survey operations and nautical chart updates.

The Topographic LIDAR was evaluated with CFF shoreline, current shoreline updates and detached positions taken during shoreline verification. The Hydrographer found the Topographic LIDAR to be quite accurate and in numerous locations more detailed and accurate than the CFF shoreline provided. The Topographic LIDAR had some noise and flyers in the data, mostly around man-made or cultural features. As noted in the Pydro session - H11120.pss and H11120 Shoreline Report, LIDAR data was verified in the field, copied digitally, and used to more accurately portray the areas listed. The Hydrographer believes a RSD reviewed Topographic LIDAR shoreline data set is a viable alternative to CFF shoreline derived from photogrammetry.²⁵

Source Shoreline Changes, New Features and Charted Features

Items for survey H11120, that needed further discussion and are associated with a detached position, have been flagged “Report” in Pydro in H11120.pss. Investigation/survey methods and recommendations are listed in the Remarks tab. A report with these items was generated, H11120_Shoreline_Report.pdf and a hard copy of the report is attached. The final eleven features in the shoreline report have already been submitted as Dangers to Navigation. A digital copy is submitted with the survey files.²⁶

The charted (17327) reef at 57°02'49.52"N , 135°23'32.51"W (476194.91E , 6322695.95N) was disproved during shoreline verification using a VBES search, and with SWMB. The Hydrographer recommends removal of the charted reef. ²⁷

The charted (17324) islet at 57:06:54.92N , 135:23:39.10W (476127.75E , 6330284.77N) was disproved during shoreline verification, with VBES and 100% SWMB. The Hydrographer recommends removal of the charted islet. ²⁸

Recommendations

The Hydrographer recommends that the shoreline as depicted on the Detached Position and Bottom Sample plot and final sounding plot in the Mapinfo digital files 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 “H11120_Shoreline_Notes.” ²⁹

D.4 Dangers to Navigation

Eleven dangers to navigation were found and reported to the Marine Chart Division (MCD) for verification and final submission to the Seventeenth Coast Guard District in the form of a digital XML file “H11120_DTON1.xml”. A copy of the preliminary Danger to Navigation file is included with the digital data. ³⁰

D.5 Aids to Navigation

Survey H11120 included five aids to navigation (ATONs). Each ATON was found to serve its intended purpose. Detached positions were taken on most ATONs for check purposes only.

The following fixed ATONs were positioned using static GPS survey methods, see the Horizontal and Vertical Control Report for OPR-O112-RA-03 for further information. ³¹

Light List Name	Light List Number	Short Name	NAD83 (CORS96) (EPOCH: 2002.0000)						Ellipsoid Ht (m)	NAVD88 Ortho Ht (m)
			N Lat (DMS)			W Long (DMS)				
Old Sitka Rocks Light 2	25055	222A	57	6	52.40196	135	24	42.19924	13.347	10.653
Kasiana Island Shoal Daybeacon 1	25050	111A	57	5	21.49964	135	24	22.90241	5.421	2.801
Signal Island Light 4	25005	SIGN	57	2	46.60135	135	23	34.40107	17.223	14.725

D.6 Miscellaneous

Bottom samples were collected and are depicted on the Detached Position and Bottom Sample Plot. ³²

Two (2) DP lines in CARIS, R5NE_2003 2003-178 DP5177 & R7NE_2003 2003-127 DP71275, have only one point in the line. CARIS does not deal well with single points and so the lines are marked with an X in the project window. Tide correctors are applied to the data

and appear correct when viewed in Pydro. The DPs associated with these lines meet requirements.³³

In February 2004, the RAINIER was informed of a bug in CARIS SBEdit that incorrectly changed 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 H11120 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. A comparison of the reconverted and original data in Mapinfo found the following differences. Roughly two percent of the soundings of the whole survey (approximately 18 lines of data affected) had a variance greater than 0.01 meters. The submitted HDCS_DATA for this survey includes the corrected VBES depths and meets requirements.

E. APPROVAL

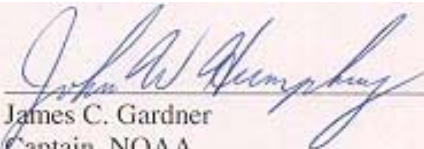
As Chief of Party, I have ensured that standard field surveying and processing procedures were followed in producing this examination in accordance with the Hydrographic Manual, Fourth Edition, Hydrographic Survey Guidelines, Field Procedures Manual and the NOS Hydrographic Surveys Specifications and 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 H11120 is complete and adequate to supersede charted soundings³⁴ in their common areas. No additional work is required for this survey.³⁵

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-O112-RA-03	October 9, 2003	N/CS34
Horizontal and Vertical Control Report for OPR- O112-RA-03	September 8, 2003	N/CS34
Tides and Water Levels Package for OPR- O112-RA-03	August 1, 2003	N/OPS1
Coast Pilot Report for OPR-O112-RA-03	October 10, 2003	N/CS26

Approved and Forwarded:  4/8/05
for James C. Gardner Date
Captain, NOAA
Commanding Officer

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

Survey Sheet Manager: 
for Lynnette V. Morgan
Senior Survey Technician, NOAA

Survey Sheet Assistant: 
for Misty M. Watson
Ensign, NOAA

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

Revisions Processed During Office Processing and Certification

¹ Concur

² Concur

³ Filed with the project records.

⁴ Concur

⁵ Do not concur, after office review this survey conforms to IHO order 1 specifications.

⁶ Examination of crosslines and mainscheme hydrography through CARIS.

⁷ Concur

⁸ Survey H11120 also junctions with surveys H11119 to the west, and H11354 to the south. The comparison with these surveys is complete. A Joins note has been added in the junction areas.

⁹ Concur, a Joins note has been added in the junction area.

¹⁰ Concur, a Joins note has been added in the junction area.

¹¹ Results of the comparison after applications of approved tides are considered good and reflects the hydrographer's findings.

¹² Filed with the project records

¹³ Approved tide note dated October 15, 2003 is attached.

¹⁴ Filed with the survey data.

¹⁵ Concur

¹⁶ Chart 17326, 15th Edition, dated June 1, 2006 was also compared with.

¹⁷ Chart 17324 14th Edition, dated Jan.1, 2005 was use to compare with this survey.

¹⁸ Chart 17327 22nd Edition, dated July 1, 2005 was used to compare with this survey.

¹⁹ Concur

²⁰ Concur

²¹ Concur

²² The results of the comparison after applications of approved tides is considered good and reflects the hydrographer's findings.

²³ Forwarded to MCD as a paper plot and .tif image and the original DP&BS plot is filed with the hydrographic records.

²⁴ Features that are to be retained as charted are drawn in brown, new MHWL found by the hydrograher and lidar source are drawn in either dashed red or solid red. All other shoreline features that were either found by the hydrographer or from a RSD source are drawn in black.

²⁵ Concur, the LIDAR shoreline was recommended by the hydrographer to use as a charted source when it was deem more accurate than either the CFF shoreline or the chart. It is recommended that the LIDAR shoreline shown on the smooth sheet supersede all shoreline in the common area. All LIDAR shoreline is shown on level 12 of the smooth sheet.

²⁶ One additional danger to navigation was found during office processing and is attached to this survey.

²⁷ Concur

²⁸ Concur

²⁹ Shoreline verification conducted by the hydrographer and portrayed on the detached position plot has been analyzed during office processing and shown on the smooth sheet as warranted.

³⁰ Final dangers to navigation are attached to this report.

³¹ The evaluator recommends that MCD use the latest information to chart aids to navigation.

³² Concur, bottom characteristics have been shown on the smooth sheet as positioned by the present survey.

³³ Concur

³⁴ insert; and features

³⁵ Concur

1 - Danger To Navigation

1.1) Profile/Beam - 281/4 from h11120 / r4re_2003 / 2003-176 / 136_2340

DANGER TO NAVIGATION

Survey Summary

Survey Position: 057° 04' 09.840" N, 135° 26' 32.103" W
Least Depth: 2.02 m
Timestamp: 2003-176.23:40:56.999 (06/25/2003)
Survey Line: h11120 / r4re_2003 / 2003-176 / 136_2340
Profile/Beam: 281/4
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Shoal Sounding

Hydrographer Recommendations

Hydrographer recommends charting sounding.

Cartographically-Rounded Depth (Affected Charts):

1fm (17320_1, 16016_1, 530_1)

1fm 0ft (17324_1, 531_1)

2.0m (500_1, 50_1)

1.2) Profile/Beam - 606/224 from h11120 / r4re_2003 / 2003-175 / 469_1814

DANGER TO NAVIGATION

Survey Summary

Survey Position: 057° 05' 03.207" N, 135° 25' 23.925" W
Least Depth: 2.70 m
Timestamp: 2003-175.18:14:43.408 (06/24/2003)
Survey Line: h11120 / r4re_2003 / 2003-175 / 469_1814
Profile/Beam: 606/224
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Shoal Sounding

Hydrographer Recommendations

Hydrographer recommends charting sounding.

Cartographically-Rounded Depth (Affected Charts):

1 ½fm (17320_1, 16016_1, 530_1)

1fm 3ft (17324_1, 531_1)

2.7m (500_1, 50_1)

1.3) Profile/Beam - 2085/41 from h11120 / r4re_2003 / 2003-176 / 107_1659

DANGER TO NAVIGATION

Survey Summary

Survey Position: 057° 04' 11.982" N, 135° 24' 25.028" W
Least Depth: 3.77 m
Timestamp: 2003-176.17:03:11.787 (06/25/2003)
Survey Line: h11120 / r4re_2003 / 2003-176 / 107_1659
Profile/Beam: 2085/41
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Shoal Sounding

Hydrographer Recommendations

Hydrographer recommends charting sounding.

Cartographically-Rounded Depth (Affected Charts):

2fm (17320_1, 16016_1, 530_1)

2fm 0ft (17324_1, 531_1)

3.7m (500_1, 50_1)

1.4) Profile/Beam - 97/60 from h11120 / r4re_2003 / 2003-175 / 295_2048

DANGER TO NAVIGATION

Survey Summary

Survey Position: 057° 04' 10.725" N, 135° 25' 23.559" W
Least Depth: 4.91 m
Timestamp: 2003-175.20:48:45.958 (06/24/2003)
Survey Line: h11120 / r4re_2003 / 2003-175 / 295_2048
Profile/Beam: 97/60
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Shoal Sounding

Hydrographer Recommendations

Hydrographer recommends charting sounding.

Cartographically-Rounded Depth (Affected Charts):

2 ½fm (17320_1, 16016_1, 530_1)

2fm 4ft (17324_1, 531_1)

4.9m (500_1, 50_1)

1.5) Profile/Beam - 369/12 from h11120 / r5re_2003 / 2003-175 / 030_0031

DANGER TO NAVIGATION

Survey Summary

Survey Position: 057° 06' 26.412" N, 135° 24' 17.255" W
Least Depth: 6.13 m
Timestamp: 2003-176.00:32:03.081 (06/25/2003)
Survey Line: h11120 / r5re_2003 / 2003-175 / 030_0031
Profile/Beam: 369/12
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Shoal Sounding

Hydrographer Recommendations

Hydrographer recommends charting sounding.

Cartographically-Rounded Depth (Affected Charts):

3 ¼fm (17320_1, 16016_1, 530_1)

3fm 2ft (17324_1, 531_1)

6.1m (500_1, 50_1)

1.6) Profile/Beam - 456/91 from h11120 / r5re_2003 / 2003-135 / 156_1804

DANGER TO NAVIGATION

Survey Summary

Survey Position: 057° 04' 27.608" N, 135° 25' 57.221" W
Least Depth: 6.13 m
Timestamp: 2003-135.18:05:19.051 (05/15/2003)
Survey Line: h11120 / r5re_2003 / 2003-135 / 156_1804
Profile/Beam: 456/91
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Shoal Sounding

Hydrographer Recommendations

Hydrographer recommends charting sounding.

Cartographically-Rounded Depth (Affected Charts):

3 ¼fm (17320_1, 16016_1, 530_1)

3fm 2ft (17324_1, 531_1)

6.1m (500_1, 50_1)

1.7) Profile/Beam - 2426/85 from h11120 / r5re_2003 / 2003-134 / 023_2228**DANGER TO NAVIGATION****Survey Summary**

Survey Position: 057° 03' 01.482" N, 135° 23' 33.929" W
Least Depth: 6.71 m
Timestamp: 2003-134.22:35:08.658 (05/14/2003)
Survey Line: h11120 / r5re_2003 / 2003-134 / 023_2228
Profile/Beam: 2426/85
Charts Affected: 17327_1, 17324_1, 17326_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Shoal Sounding

Hydrographer Recommendations

Hydrographer recommends charting sounding.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17327_1, 17326_1, 17320_1, 16016_1, 530_1)

3fm 4ft (17324_1, 531_1)

6.7m (500_1, 50_1)

1.8) Profile/Beam - 327/240 from h11120 / r4re_2003 / 2003-176 / 314_1737**DANGER TO NAVIGATION****Survey Summary**

Survey Position: 057° 04' 20.403" N, 135° 23' 23.044" W
Least Depth: 8.37 m
Timestamp: 2003-176.17:38:18.600 (06/25/2003)
Survey Line: h11120 / r4re_2003 / 2003-176 / 314_1737
Profile/Beam: 327/240
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Shoal Sounding

Hydrographer Recommendations

Hydrographer recommends charting sounding.

Cartographically-Rounded Depth (Affected Charts):

4 ½fm (17320_1, 16016_1, 530_1)

4fm 3ft (17324_1, 531_1)

8.3m (500_1, 50_1)

1.9) Profile/Beam - 1865/88 from h11120 / r5re_2003 / 2003-129 / 006_2034**DANGER TO NAVIGATION****Survey Summary**

Survey Position: 057° 05' 12.931" N, 135° 25' 36.101" W
Least Depth: 8.48 m
Timestamp: 2003-129.20:41:18.279 (05/09/2003)
Survey Line: h11120 / r5re_2003 / 2003-129 / 006_2034
Profile/Beam: 1865/88
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Shoal Sounding, 8.48 meters

Hydrographer Recommendations

Hydrographer recommends charting sounding.

Cartographically-Rounded Depth (Affected Charts):

4 ½fm (17320_1, 16016_1, 530_1)

4fm 4ft (17324_1, 531_1)

8.5m (500_1, 50_1)

1.10) Profile/Beam - 856/92 from h11120 / r5re_2003 / 2003-129 / 116_2224**DANGER TO NAVIGATION****Survey Summary**

Survey Position: 057° 04' 51.663" N, 135° 26' 18.643" W
Least Depth: 10.85 m
Timestamp: 2003-129.22:26:11.436 (05/09/2003)
Survey Line: h11120 / r5re_2003 / 2003-129 / 116_2224
Profile/Beam: 856/92
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Shoal Sounding

Hydrographer Recommendations

Hydrographer recommends charting sounding.

Cartographically-Rounded Depth (Affected Charts):

5 ¾fm (17320_1, 16016_1, 530_1)

5fm 5ft (17324_1, 531_1)

10.8m (500_1, 50_1)

1.11) Profile/Beam - 93/1 from h11120 / r7sb_2003 / 2003-127 / 048_1914

DANGER TO NAVIGATION

Survey Summary

Survey Position: 057° 02' 09.155" N, 135° 23' 44.489" W
Least Depth: 16.67 m
Timestamp: 2003-127.19:14:37.477 (05/07/2003)
Survey Line: h11120 / r7sb_2003 / 2003-127 / 048_1914
Profile/Beam: 93/1
Charts Affected: 17327_1, 17326_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Shoal Sounding

Hydrographer Recommendations

Hydrographer recommends charting sounding.

Cartographically-Rounded Depth (Affected Charts):

9fm (17327_1, 17326_1, 17320_1, 16016_1, 530_1)

9fm 0ft (531_1)

16.6m (500_1, 50_1)

1.1) Profile/Beam - 382/56 from h11120 / r4re_2003 / 2003-176 / 280_2349**DANGER TO NAVIGATION****Survey Summary**

Survey Position: 057° 04' 02.136" N, 135° 26' 20.791" W
Least Depth: 3.84 m
Timestamp: 2003-176.23:50:30.405 (06/25/2003)
Survey Line: h11120 / r4re_2003 / 2003-176 / 280_2349
Profile/Beam: 382/56
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

DTON discovered by survey reviewer in office

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

2fm (17320_1, 16016_1, 530_1)

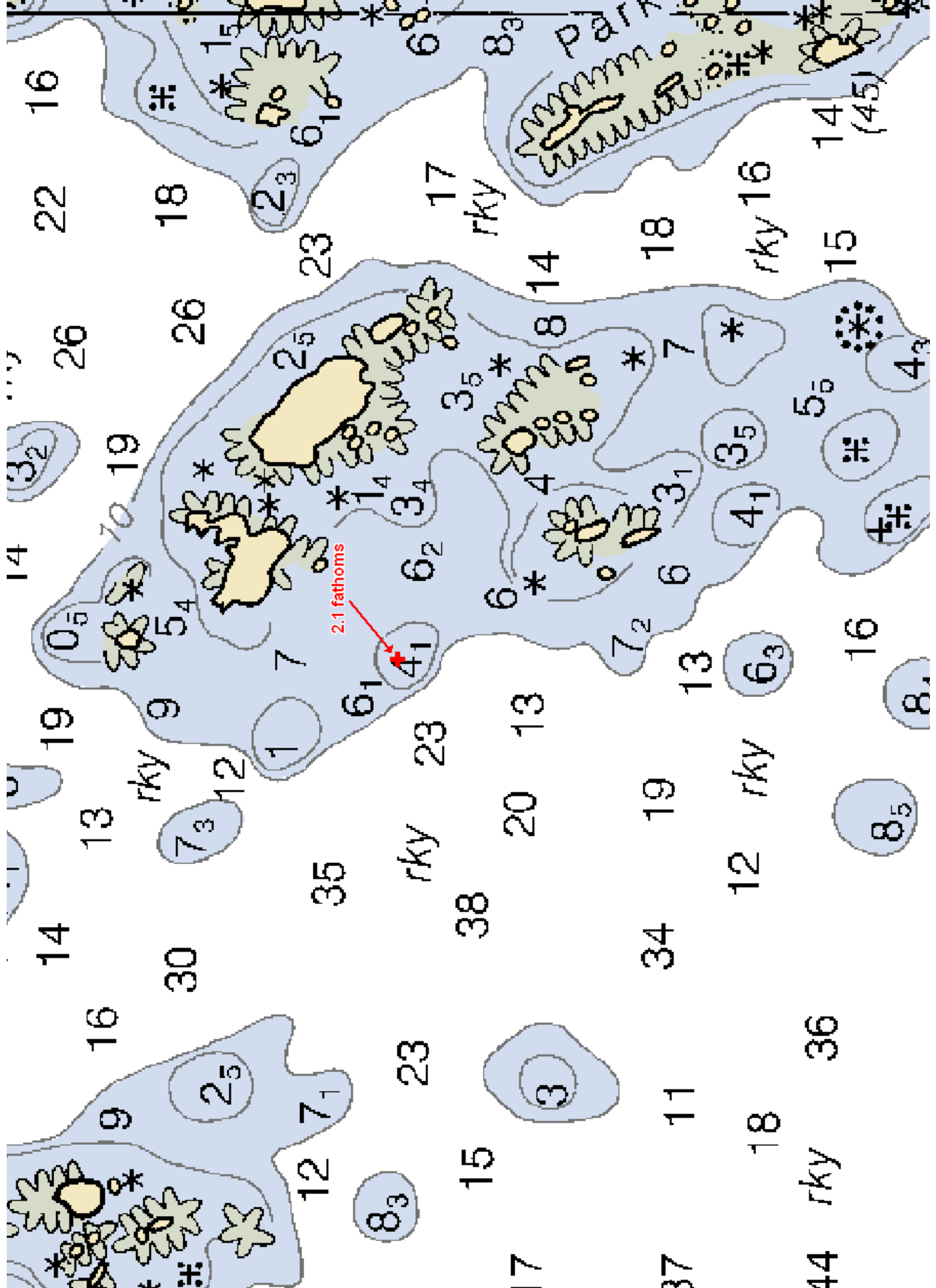
2fm 0ft (17324_1, 531_1)

3.8m (500_1, 50_1)

S-57 Data

Geo object 1: Sounding (SOUNDG)

Attributes: INFORM - DTON discovered by survey reviewer in office



H1120 Shoreline Report

Registry Number: H1120
State: Alaska
Locality: Sitka Sound
Sub-locality: Approaches to Sitka Harbor
Project Number: OPR-O112-RA-03
Survey Dates: 5/06/2003 - 6/ 26/2003

Charts Affected

Number	Version	Date	Scale
17327	20th Ed.	11/22/97	1:10000
17324	13th Ed.	03/25/89	1:40000
17326	13th Ed.	08/05/00	1:40000
17320	15th Ed.	03/06/99	1:217828
16016	19th Ed.	07/10/93	1:969756
531	21st Ed.	02/02/02	1:2100000
500	7th Ed.	06/01/96	1:3500000
530	30th Ed.	03/23/02	1:4860700
50	5th Ed.	07/30/94	1:10000000

Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Sounding	-1.06 m	57.04560414° N	135.38034461° W	---
1.2	Sounding	-2.75 m	57.07117341° N	135.41614153° W	---
1.3	Sounding	-0.89 m	57.05453472° N	135.40064588° W	---
1.4	Sounding	-4.89 m	57.05502568° N	135.39960522° W	---
1.5	Sounding	-0.86 m	57.07496032° N	135.40564122° W	---
1.6	Sounding	-6.27 m	57.11708125° N	135.38940153° W	---
1.7	Sounding	-0.60 m	57.11330294° N	135.40558581° W	---
1.8	Sounding	-0.04 m	57.11277593° N	135.40396835° W	---
1.9	Sounding	-0.04 m	57.07724671° N	135.42565033° W	---

1.10	Sounding	-1.04 m	57.07721405° N	135.42719778° W	---
1.11	Sounding	-1.55 m	57.07922330° N	135.42723336° W	---
1.12	Sounding	-0.26 m	57.06861578° N	135.41756412° W	---
1.13	Sounding	4.04 m	57.09705701° N	135.39809399° W	---
1.14	Sounding	9998.88 m	57.10691211° N	135.44106342° W	---
1.15	Sounding	-4.00 m	57.08901205° N	135.38842229° W	---
1.16	Sounding	-2.42 m	57.09048031° N	135.39070558° W	---
1.17	Sounding	-2.35 m	57.09090711° N	135.39225131° W	---
1.18	Rock	-2.79 m	57.09949976° N	135.40114820° W	---
1.19	Sounding	-4.20 m	57.11429788° N	135.39437486° W	---
1.20	Pile	-5.06 m	57.11807585° N	135.38877815° W	---
1.21	Sounding	-3.53 m	57.12009845° N	135.39170075° W	---
1.22	Sounding	-3.84 m	57.05748092° N	135.41646387° W	---
1.23	Sounding	-2.91 m	57.05464375° N	135.40057478° W	---
1.24	Sounding	-4.42 m	57.05344174° N	135.42888657° W	---
1.25	Sounding	-5.11 m	57.07222513° N	135.43664528° W	---
1.26	Sounding	-5.82 m	57.06837216° N	135.41567932° W	---
1.27	Sounding	1.50 m	57.10728448° N	135.44257866° W	---
1.28	Sounding	8.48 m	57.08677012° N	135.43631875° W	---
1.29	Sounding	5.50 m	57.08409900° N	135.40570785° W	---
1.30	Sounding	2.20 m	57.11624508° N	135.39262161° W	---
1.31	Rock	0.40 m	57.06714598° N	135.41306222° W	---
1.32	Sounding	-2.75 m	57.11628965° N	135.39302423° W	---
1.33	Sounding	-4.87 m	57.11257660° N	135.40588936° W	---
1.34	Sounding	-3.97 m	57.10901269° N	135.44417756° W	---
1.35	Sounding	-4.83 m	57.11143143° N	135.40532638° W	---
1.36	Sounding	-4.36 m	57.11229230° N	135.40425569° W	---
1.37	Pile	-4.51 m	57.11307966° N	135.39590305° W	---
1.38	Sounding	-3.22 m	57.09054351° N	135.43598775° W	---
1.39	Sounding	9998.42 m	57.11764923° N	135.38888890° W	---
1.40	Sounding	-3.36 m	57.08317625° N	135.40139623° W	---
2.1	Shoal	6.15 m	57.10733644° N	135.40479244° W	---
2.2	Shoal	8.48 m	57.08692517° N	135.42669478° W	---
2.3	Shoal	2.70 m	57.08422424° N	135.42331250° W	---
2.4	Shoal	8.37 m	57.07233428° N	135.38973448° W	---

2.5	Shoal	6.71 m	57.05041154° N	135.39275809° W	---
2.6	Shoal	16.67 m	57.03587629° N	135.39569129° W	---
2.7	Shoal	4.91 m	57.06964585° N	135.42321097° W	---
2.8	Shoal	2.02 m	57.06940011° N	135.44225093° W	---
2.9	Shoal	6.13 m	57.07433568° N	135.43256141° W	---
2.10	Shoal	10.85 m	57.08101757° N	135.43851203° W	---
2.11	Shoal	3.77 m	57.06999501° N	135.40695232° W	---
2.12	Shoal	3.84 m	57.06725988° N	135.43910871° W	---

1 - New Features

1.1) Profile/Beam - 1/1 from H11120 / R1NE_2003 / 2003-135 / DP1135

Survey Summary

Survey Position: 57.04560414° N, 135.38034461° W
Least Depth: -1.06 m
Timestamp: 2003-135.15:15:47.000 (05/15/2003)
DP Dataset: H11120 / R1NE_2003 / 2003-135 / DP1135
Profile/Beam: 1/1
Charts Affected: 17327_1, 17324_1, 17326_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

113559 New ext Chd (17327) ldg, CFF and chd rks exts

During shoreline verification, the CFF rock and five charted (17327) rocks were observed to be new extents of the charted ledge. The seaward most extent of the ledge was positioned with DP#113559. The CFF and charted foul areas were repositioned with the VBES shoreline buffer. The DPBS plot depicts the area as observed by the Hydrographer.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R1NE_2003/2003-135/DP1135	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

0 ½fm (17327_1, 17326_1, 17320_1, 16016_1, 530_1)

0fm 3ft (17324_1, 531_1)

-1.1m (500_1, 50_1)

Office Notes

Chart ledges as depicted on the smooth sheet.

1.2) Profile/Beam - 8/1 from H11120 / R7NE_2003 / 2003-135 / DP135

Survey Summary

Survey Position: 57.07117341° N, 135.41614153° W
Least Depth: -2.75 m
Timestamp: 2003-135.16:20:04.000 (05/15/2003)
DP Dataset: H11120 / R7NE_2003 / 2003-135 / DP135
Profile/Beam: 8/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

71352422 Revised position Chd (17324) islet

The charted islet was verified with DP#71352422 and VBES during shoreline verification.

During lidar verification, the lidar MHW was verified and corresponded with the height and position of DP#71352422. The SWMB and VBES buffer were used to define low water extent of the islet. The Hydrographer did not find the area to be foul. The lidar MHW was found to be more accurate and copied digitally and added to the H11120_Shoreline_Updates as a change to MHW.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R7NE_2003/2003-135/DP135	8/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-1 ½fm (17320_1, 16016_1, 530_1)

-1fm 3ft (17324_1, 531_1)

-2.8m (500_1, 50_1)

Office Notes

Revise charted position of islet, see smooth sheet for depiction of the area.

1.3) Profile/Beam - 12/1 from H11120 / R2NE_2003 / 2003-141 / DP2141

Survey Summary

Survey Position: 57.05453472° N, 135.40064588° W
Least Depth: -0.89 m
Timestamp: 2003-141.19:30:37.000 (05/21/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-141 / DP2141
Profile/Beam: 12/1
Charts Affected: 17327_1, 17324_1, 17326_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

2141345 ext Chd(17327) reef

The charted(17327) reef was positioned with DP#2141345 during shoreline verification. Noting that the CFF rk was the highpoint of the reef.

See DP#2170144, for height and CFF rock/lidar islet verification information on highpoint.

During lidar verification, the lidar MLLW was verified to correspond with the western extent of the reef, DP#2141345. The lidar MLLW was verified to extend farther to the south than the charted position of the reef. The existing charted reef as well as lidar MLLW was copied digitally and added to the H11120_Shoreline_Updates table as reef along with Hydrographer updates were used to accurately portray the reef.

The DPBS plot depicts the area as observed by the Hydrographer.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-141/DP2141	12/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

0 ½fm (17327_1, 17326_1, 17320_1, 16016_1, 530_1)

0fm 3ft (17324_1, 531_1)

-.9m (500_1, 50_1)

Office Notes

Remove charted rock, highpoint. Chart reef according to the smooth sheet. Retain charted islet

1.4) Profile/Beam - 13/1 from H11120 / R2NE_2003 / 2003-141 / DP2141

Survey Summary

Survey Position: 57.05502568° N, 135.39960522° W
Least Depth: -4.89 m
Timestamp: 2003-141.19:32:07.000 (05/21/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-141 / DP2141
Profile/Beam: 13/1
Charts Affected: 17327_1, 17324_1, 17326_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

2141346 E ext Chd(17327) ldg

The charted ledge was repositioned with DP#2141346 during shoreline verification.

During lidar verification, the lidar MLLW was verified to correspond with the eastern extent of the ledge, DP#2141346. The existing charted ledge as well as lidar MLLW, were copied digitally and added to the H11120_Shoreline_Updates as ledge, and used to accurately portray the ledge.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-141/DP2141	13/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-2 ½fm (17327_1, 17326_1, 17320_1, 16016_1, 530_1)

-2fm 4ft (17324_1, 531_1)

-4.9m (500_1, 50_1)

Office Notes

Chart ledge as depicted on the smooth sheet.

1.5 Profile/Beam - 2/1 from H11120 / R2NE_2003 / 2003-150 / 2150

Survey Summary

Survey Position: 57.07496032° N, 135.40564122° W
Least Depth: -0.86 m
Timestamp: 2003-150.15:52:16.000 (05/30/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-150 / 2150
Profile/Beam: 2/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

2150119 Chd(17324) rks exts new ldg

The charted (17324) rock at 57:04:30.489N , 135:24:21.572W (475386.64E , 6325822.94N) was disproved visually during shoreline verification, with a VBES search and 100% SWMB.

The extent of a new ledge was positioned with DP#2150119.

During lidar low water verification, the lidar MLLW was found to accurately represent the extents of the ledge at low water. The Lidar MLLW was used to accurately portray the extents of the ledge in the H11120_Shoreline_Updates table.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-150/2150	2/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

0 ½fm (17320_1, 16016_1, 530_1)

0fm 3ft (17324_1, 531_1)

-.9m (500_1, 50_1)

Office Notes

Remove charted rock and chart ledge as depicted on the smooth sheet.

1.6) Profile/Beam - 6/1 from H11120 / R1NE_2003 / 2003-150 / DP1150

Survey Summary

Survey Position: 57.11708125° N, 135.38940153° W
Least Depth: -6.27 m
Timestamp: 2003-150.17:04:56.000 (05/30/2003)
DP Dataset: H11120 / R1NE_2003 / 2003-150 / DP1150
Profile/Beam: 6/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

1150358 New ext CFF floating dock

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R1NE_2003/2003-150/DP1150	6/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

- 3 ¼fm (17320_1, 16016_1, 530_1)
- 3fm 2ft (17324_1, 531_1)
- 6.3m (500_1, 50_1)

Office Notes

Chart floating pier as depicted on the smooth sheet.

1.7) Profile/Beam - 2/1 from H11120 / R1NE_2003 / 2003-153 / DP1153

Survey Summary

Survey Position: 57.11330294° N, 135.40558581° W
Least Depth: -0.60 m
Timestamp: 2003-153.16:19:32.000 (06/02/2003)
DP Dataset: H11120 / R1NE_2003 / 2003-153 / DP1153
Profile/Beam: 2/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

115388 New ext Chd(17324) ldg

The charted ledge was positioned with DP#115388 during shoreline verification.

The lidar MLLW was verified to correspond with the western extent of the ledge, DP#115388. The lidar MLLW was verified to extend farther to the northeast than the charted position of the ledge. The Lidar MLLW was copied digitally, added to the H11120_Shoreline_Updates table, and displayed as a ledge along with updates made by the Hydrographer to accurately portray the ledge.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R1NE_2003/2003-153/DP1153	2/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

0 ¼fm (17320_1, 16016_1, 530_1)

0fm 2ft (17324_1, 531_1)

-.6m (500_1, 50_1)

Office Notes

Chart ledge as depicted on the smooth sheet

1.8) Profile/Beam - 4/1 from H11120 / R1NE_2003 / 2003-153 / DP1153

Survey Summary

Survey Position: 57.11277593° N, 135.40396835° W
Least Depth: -0.04 m
Timestamp: 2003-153.16:34:47.000 (06/02/2003)
DP Dataset: H11120 / R1NE_2003 / 2003-153 / DP1153
Profile/Beam: 4/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

1153133 New ext Chd(17324) ldg

The ledge was positioned at DP#1153133 and the Lidar MLLW was verified as ledge. The Lidar MLLW was copied digitally and added to the H11120_Shoreline_Updates table as ledge along with Hydrographer updates were used to accurately portray the ledge.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R1NE_2003/2003-153/DP1153	4/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

0fm (17320_1, 16016_1, 530_1)

0fm 0ft (17324_1, 531_1)

-.1m (500_1, 50_1)

Office Notes

Chart ledge as depicted on the smooth sheet

1.9) Profile/Beam - 12/1 from H11120 / R1NE_2003 / 2003-153 / DP1153

Survey Summary

Survey Position: 57.07724671° N, 135.42565033° W
Least Depth: -0.04 m
Timestamp: 2003-153.17:40:40.000 (06/02/2003)
DP Dataset: H11120 / R1NE_2003 / 2003-153 / DP1153
Profile/Beam: 12/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

1153295 Ext new ldg

New ledges were positioned with DP#1153295, 1153296, and 1153297 during shoreline verification.

During lidar low water verification, the lidar MLLW was verified to correspond with the southern extent of the new ledge, DP#1153296. The lidar MLLW was also verified to north to DP#1153297 and to the east toward DP#1153295. The lidar MLLW was copied digitally and added to the H11120_Shoreline_Updates table as ledge along with Hydrographer updates and detached positions were used to accurately portray the ledges in the area.

During lidar high water verification, the lidar MHW at 57°04'44.234"N , 135°25'39.612"W (474073.9E , 6326249.31N) and 57°04'38.428"N , 135°25'36.998"W (474117.99E , 6326076.16N) were verified. The lidar MHW was copied digitally and added to the H11120_Shoreline_Updates table as a change to MHW.

The DPBS plot depicts the area as observed in the field by the Hydrographer.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R1NE_2003/2003-153/DP1153	12/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

0fm (17320_1, 16016_1, 530_1)

0fm 0ft (17324_1, 531_1)

-.1m (500_1, 50_1)

Office Notes

Chart ledges as depicted on the smooth sheet

1.10) Profile/Beam - 13/1 from H11120 / R1NE_2003 / 2003-153 / DP1153

Survey Summary

Survey Position: 57.07721405° N, 135.42719778° W
Least Depth: -1.04 m
Timestamp: 2003-153.17:44:26.000 (06/02/2003)
DP Dataset: H11120 / R1NE_2003 / 2003-153 / DP1153
Profile/Beam: 13/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

1153296 S ext new ldg

New ledges were positioned with DP#1153295, 1153296, and 1153297 during shoreline verification.

During lidar low water verification, the lidar MLLW was verified to correspond with the southern extent of the new ledge, DP#1153296. The lidar MLLW was also verified to the north at DP#1153297 and to the east toward DP#1153295. The lidar MLLW was copied digitally and added to the H11120_Shoreline_Updates table as ledge along with Hydrographer updates, and detached positions all were used to accurately portray the ledges in the area.

During lidar high water verification, the lidar MHW at 57°04'44.234"N , 135°25'39.612"W (474073.9E , 6326249.31N) and 57°04'38.428"N , 135°25'36.998"W (474117.99E , 6326076.16N) were verified. The lidar MHW was copied digitally and added to the H11120_Shoreline_Updates table as a change to MHW.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R1NE_2003/2003-153/DP1153	13/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

0 ½fm (17320_1, 16016_1, 530_1)

0fm 3ft (17324_1, 531_1)

-1.1m (500_1, 50_1)

Office Notes

Chart new ledges as depicted on the smooth sheet

1.11) Profile/Beam - 14/1 from H11120 / R1NE_2003 / 2003-153 / DP1153

Survey Summary

Survey Position: 57.07922330° N, 135.42723336° W
Least Depth: -1.55 m
Timestamp: 2003-153.17:47:17.000 (06/02/2003)
DP Dataset: H11120 / R1NE_2003 / 2003-153 / DP1153
Profile/Beam: 14/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

1153297 Ext new ldg, ext foul

New ledges were positioned with DP#1153295, 1153296, and 1153297 during shoreline verification.

During lidar low water verification, the lidar MLLW was verified to correspond with the southern extent of the new ledge, DP#1153296. The lidar MLLW was also verified to north to DP#1153297 and to the east toward DP#1153295. The lidar MLLW was copied digitally and added to the H11120_Shoreline_Updates table as ledge along with Hydrographer updates and detached positions were used to accurately portray the ledges in the area.

During lidar high water verification, the lidar MHW at 57°04'44.234"N , 135°25'39.612"W (474073.9E , 6326249.31N) and 57°04'38.428"N , 135°25'36.998"W (474117.99E , 6326076.16N) were verified. The lidar MHW was copied digitally and added to the H11120_Shoreline_Updates table as a change to MHW.

The DPBS plot depicts the area as observed in the field by the Hydrographer.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R1NE_2003/2003-153/DP1153	14/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

0 ¾fm (17320_1, 16016_1, 530_1)

0fm 5ft (17324_1, 531_1)

-1.6m (500_1, 50_1)

Office Notes

Chart ledge as depicted on the smooth sheet

1.12) Profile/Beam - 18/1 from H11120 / R1NE_2003 / 2003-153 / DP1153

Survey Summary

Survey Position: 57.06861578° N, 135.41756412° W
Least Depth: -0.26 m
Timestamp: 2003-153.18:26:14.000 (06/02/2003)
DP Dataset: H11120 / R1NE_2003 / 2003-153 / DP1153
Profile/Beam: 18/1
Charts Affected: 17327_1, 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

1153400 Chd (17327) rks are exts Chd (17324) ldg

A new extent of the charted (17324) ledge was positioned, during shoreline verification, at DP#1153400. The charted (17327) rocks are extents of the ledge.

During lidar verification, the lidar MLLW was verified as ledge. Lidar MLLW was copied digitally and added to the H11120_Shoreline_Updates as ledge, the existing charted ledge and Hydrographer updates were also used to accurately portray the ledge to the west of DP#1153400.

Additionally during lidar verification, the Lidar MHW was verified in the area of 57°04'08.083"N , 135°25'11.305"W (474544.86E , 6325135.2N). The Lidar MHW was observed to be more accurate than the CFF or charted MHW. The Lidar MHW was copied digitally and added to the H11120_Shoreline_Updates table as a change to MHW.

The DPBS plot depicts the area as observed by the Hydrographer.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R1NE_2003/2003-153/DP1153	18/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

0fm (17327_1, 17320_1, 16016_1, 530_1)

0fm 1ft (17324_1, 531_1)

-.3m (500_1, 50_1)

Office Notes

Chart ledge as depicted on the smooth sheet

1.13) Profile/Beam - 1/1 from H11120 / R2SB_2003 / 2003-168 / DP2168

Survey Summary

Survey Position: 57.09705701° N, 135.39809399° W
Least Depth: 4.04 m
Timestamp: 2003-168.16:37:30.000 (06/17/2003)
DP Dataset: H11120 / R2SB_2003 / 2003-168 / DP2168
Profile/Beam: 1/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

2168410 Chd(17324) rk disproval

During shoreline verification, the charted rock was disproved with a 3 minute visual/VBES search with a water visibility of 1.5 meters and DP# 2168410. A new rock was located approximately 60 meters south at DP#215423.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2SB_2003/2003-168/DP2168	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

2 ¼fm (17320_1, 16016_1, 530_1)

2fm 1ft (17324_1, 531_1)

4.0m (500_1, 50_1)

Office Notes

Remove charted rock at the position above. Chart rock covered 1 ft at MLLW

1.14) Profile/Beam - 1/1 from H11120 / R2NE_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.10691211° N, 135.44106342° W
Least Depth: 9998.88 m
Timestamp: 2003-170.16:23:50.000 (06/19/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-170 / DP2170
Profile/Beam: 1/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

2170522 fltg house boat
 Positioned during lidar verification, 30m x 15m.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-170/DP2170	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

5467fm (17320_1, 16016_1, 530_1)
 5467fm (17324_1, 531_1)
 9999m (500_1, 50_1)

Office Notes

Chart houseboat as depicted on the smooth sheet.

1.15) Profile/Beam - 2/1 from H11120 / R2NE_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.08901205° N, 135.38842229° W
Least Depth: -4.00 m
Timestamp: 2003-170.17:21:02.000 (06/19/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-170 / DP2170
Profile/Beam: 2/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

217089 New islet

During lidar verification, the lidar islet was verified and the highpoint was positioned, DP#2170199. The lidar islet was copied digitally and added to the H11120_Shoreline_Updates table as a change to MHW.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-170/DP2170	2/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-2fm (17320_1, 16016_1, 530_1)
 -2fm 1ft (17324_1, 531_1)
 -4.0m (500_1, 50_1)

Office Notes

Chart islet as depicted on the smooth sheet

1.16) Profile/Beam - 4/1 from H11120 / R2NE_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.09048031° N, 135.39070558° W
Least Depth: -2.42 m
Timestamp: 2003-170.17:30:17.000 (06/19/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-170 / DP2170
Profile/Beam: 4/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

217091 Chd(17324) islet is ext new ldg

During lidar verification, the charted islet was found to be the extent of a new ledge, DP#217091. The lidar MLLW was copied digitally and added to the H11120_Shoreline_Updates table as a ledge.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-170/DP2170	4/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-1 ¼fm (17320_1, 16016_1, 530_1)
 -1fm 2ft (17324_1, 531_1)
 -2.4m (500_1, 50_1)

Office Notes

Chart ledge as depicted on the smooth sheet

1.17) Profile/Beam - 5/1 from H11120 / R2NE_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.09090711° N, 135.39225131° W
Least Depth: -2.35 m
Timestamp: 2003-170.17:37:27.000 (06/19/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-170 / DP2170
Profile/Beam: 5/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

217092 New ext Chd (17324) 1dg

During lidar verification, the lidar ledge was found to more accurately portray the ledge, DP#217092. The lidar MLLW was copied digitally and added to the H11120_Shoreline_Updates table as a ledge.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-170/DP2170	5/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

- 1 ¼fm (17320_1, 16016_1, 530_1)
- 1fm 1ft (17324_1, 531_1)
- 2.4m (500_1, 50_1)

Office Notes

Chart ledge as depicted on the smooth sheet

1.18) Profile/Beam - 6/1 from H11120 / R2NE_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.09949976° N, 135.40114820° W
Least Depth: -2.79 m
Timestamp: 2003-170.17:43:38.000 (06/19/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-170 / DP2170
Profile/Beam: 6/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

217093 Chd(17324) islet is ledge

Two charted islets were investigated during lidar verification. The northern islet was found to be a ledge, connected to shore at low water, DP#217093. The charted islet at 57:05:55.899N , 135:24:01.872W (475733.90E , 6328461.96N) was found to be the verified lidar islets 20 meters to the east. The lidar islets were copied digitally and added to the H11120_Shoreline_Updates table as a change to MHW.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-170/DP2170	6/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-1 ½fm (17320_1, 16016_1, 530_1)

-1fm 3ft (17324_1, 531_1)

-2.8m (500_1, 50_1)

Office Notes

Chart ledge as depicted on the smooth sheet

1.19) Profile/Beam - 7/1 from H11120 / R2NE_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.11429788° N, 135.39437486° W
Least Depth: -4.20 m
Timestamp: 2003-170.17:55:46.000 (06/19/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-170 / DP2170
Profile/Beam: 7/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

217094 CFF rk is lidar islet

The CFF rock was found to be the highpoint of an islet. The charted (17324) islet is located too far to the West. During lidar verification, the lidar islet was verified and the highpoint was positioned, DP#217094. The charted islet at 57:06:52.422N , 135:23:39.715W (476116.88E , 6330207.54N)was found to be the lidar islet farther inshore. The lidar islets were copied digitally and added to the H11120_Shoreline_Updates table as changes to MHW.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-170/DP2170	7/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-2 ¼fm (17320_1, 16016_1, 530_1)

-2fm 2ft (17324_1, 531_1)

-4.2m (500_1, 50_1)

Office Notes

Chart islet as depicted on the smooth sheet

1.20) Profile/Beam - 9/1 from H11120 / R2NE_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.11807585° N, 135.38877815° W
Least Depth: -5.06 m
Timestamp: 2003-170.18:13:32.000 (06/19/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-170 / DP2170
Profile/Beam: 9/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

2170120 pile, new log breakwater, CFF rk disproval

Two piles were observed attached to a log breakwater during shoreline verification, the northern pile was DP'd.

The CFF rock was disproved during shoreline verification with 100% SWMB.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-170/DP2170	9/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-2 ¾fm (17320_1, 16016_1, 530_1)

-2fm 4ft (17324_1, 531_1)

-5.1m (500_1, 50_1)

Office Notes

Remove charted rock, chart piles at the survey position. The log breakwater found by the hydrographer is a floating pier, chart floating pier at survey position.

1.21) Profile/Beam - 10/1 from H11120 / R2NE_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.12009845° N, 135.39170075° W
Least Depth: -3.53 m
Timestamp: 2003-170.18:20:10.000 (06/19/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-170 / DP2170
Profile/Beam: 10/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

2170121 Lidar islet hp ldg

During lidar verification, the lidar islet was verified and the highpoint was positioned, DP#2170121. The lidar islet was copied digitally and added to the H11120_Shoreline_Updates table as a change to MHW. The charted ledge was positioned based on the shoreline verification buffer line.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-170/DP2170	10/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-1 ¾fm (17320_1, 16016_1, 530_1)

-1fm 5ft (17324_1, 531_1)

-3.6m (500_1, 50_1)

Office Notes

Chart ledge and islet positioned by the hydrographer

1.22) Profile/Beam - 15/1 from H11120 / R2NE_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.05748092° N, 135.41646387° W
Least Depth: -3.84 m
Timestamp: 2003-170.19:36:04.000 (06/19/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-170 / DP2170
Profile/Beam: 15/1
Charts Affected: 17327_1, 17324_1, 17326_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

2170142 CFF rk is Chd (17327) islet
 DP'd for height reference

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-170/DP2170	15/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-2fm (17327_1, 17326_1, 17320_1, 16016_1, 530_1)
 -2fm 0ft (17324_1, 531_1)
 -3.9m (500_1, 50_1)

Office Notes

Chart islet as depicted on the smooth sheet

1.23) Profile/Beam - 17/1 from H11120 / R2NE_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.05464375° N, 135.40057478° W
Least Depth: -2.91 m
Timestamp: 2003-170.20:04:57.000 (06/19/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-170 / DP2170
Profile/Beam: 17/1
Charts Affected: 17327_1, 17324_1, 17326_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

2170144 CFF rk hp Chd(17327) reef

The CFF rk/Lidar islet (highpoint of reef) was DP'd for height reference during lidar verification. Area does not appear to be an islet in the field. The DPBS plot depicts the area as observed by the Hydrographer.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-170/DP2170	17/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-1 ½fm (17327_1, 17326_1, 17320_1, 16016_1, 530_1)
 -1fm 3ft (17324_1, 531_1)
 -2.9m (500_1, 50_1)

Office Notes

Retain charted rock, highpoint, of reef. Due to scale of the chart, it is recommended that the ledge and reef be combined surrounding Usher Rock. See smooth sheet for depiction of the area.

1.24) Profile/Beam - 20/1 from H11120 / R2NE_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.05344174° N, 135.42888657° W
Least Depth: -4.42 m
Timestamp: 2003-170.22:21:04.000 (06/19/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-170 / DP2170
Profile/Beam: 20/1
Charts Affected: 17327_1, 17324_1, 17326_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

2170194 CFF rk is Chd (17327) islet

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-170/DP2170	20/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

- 2 ¼fm (17327_1, 17326_1, 17320_1, 16016_1, 530_1)
- 2fm 2ft (17324_1, 531_1)
- 4.4m (500_1, 50_1)

Office Notes

Chart islet as depicted on smooth sheet

1.25) Profile/Beam - 22/1 from H11120 / R2NE_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.07222513° N, 135.43664528° W
Least Depth: -5.11 m
Timestamp: 2003-170.22:39:41.000 (06/19/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-170 / DP2170
Profile/Beam: 22/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

2170199 CFF rk is lidar islet

The CFF rock was found to be the highpoint of an islet. The islet is charted too far to the NE and was disproved with VBES. The VBES shoreline buffer and DP#215463 were used to define the extents of the surrounding ledge.

During lidar verification, the lidar islet was verified and the highpoint was positioned, DP#2170199. The lidar islet was copied digitally and added to the H11120_Shoreline_Updates table as a change to MHW.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-170/DP2170	22/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-2 ¾fm (17320_1, 16016_1, 530_1)

-2fm 5ft (17324_1, 531_1)

-5.1m (500_1, 50_1)

Office Notes

Chart islet as depicted on the smooth sheet.

1.26) Profile/Beam - 23/1 from H11120 / R2NE_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.06837216° N, 135.41567932° W
Least Depth: -5.82 m
Timestamp: 2003-170.22:59:03.000 (06/19/2003)
DP Dataset: H11120 / R2NE_2003 / 2003-170 / DP2170
Profile/Beam: 23/1
Charts Affected: 17327_1, 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

2170200 CFF rk is Chd(17327) islet

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2NE_2003/2003-170/DP2170	23/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-3fm (17327_1, 17320_1, 16016_1, 530_1)

-3fm 1ft (17324_1, 531_1)

-5.8m (500_1, 50_1)

Office Notes

Chart islet as depicted on the smooth sheet.

1.27) Profile/Beam - 1/1 from H11120 / R2SB_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.10728448° N, 135.44257866° W
Least Depth: 1.50 m
Timestamp: 2003-170.16:29:13.000 (06/19/2003)
DP Dataset: H11120 / R2SB_2003 / 2003-170 / DP2170
Profile/Beam: 1/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

21703 Chd(17324) islet disproval

The charted islet was disproved visually by Hydrographer during shoreline verification and with DP#21703. The area was too shoal for a VBES search. During the visual search, the bottom was visible at 2.0m.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2SB_2003/2003-170/DP2170	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

0 ¾fm (17320_1, 16016_1, 530_1)

0fm 5ft (17324_1, 531_1)

1.5m (500_1, 50_1)

Office Notes

Remove charted islet, retain charted rock at latitude 57/6/25.8N, longitude 135/26/30.4W

1.28) Profile/Beam - 2/1 from H11120 / R2SB_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.08677012° N, 135.43631875° W
Least Depth: 8.48 m
Timestamp: 2003-170.16:55:25.000 (06/19/2003)
DP Dataset: H11120 / R2SB_2003 / 2003-170 / DP2170
Profile/Beam: 2/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

217025 Chd(17324) rk disproval

The charted rock was disproved during shoreline verification, with DP#217025, with VBES and 100% SWMB.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2SB_2003/2003-170/DP2170	2/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

4 ½fm (17320_1, 16016_1, 530_1)

4fm 4ft (17324_1, 531_1)

8.5m (500_1, 50_1)

Office Notes

Remove charted rock

1.29) Profile/Beam - 3/1 from H11120 / R2SB_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.08409900° N, 135.40570785° W
Least Depth: 5.50 m
Timestamp: 2003-170.17:12:24.000 (06/19/2003)
DP Dataset: H11120 / R2SB_2003 / 2003-170 / DP2170
Profile/Beam: 3/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

217081 Chd(17324) rk disproval

The charted (17324) rock was disproved visually during shoreline verification with DP#217081, VBES, and SWMB. A four minute VBES star pattern search was conducted, that covered an 80m radius. During the search, there was 1 to 2 foot chop and 2 meter visibility.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2SB_2003/2003-170/DP2170	3/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

3fm (17320_1, 16016_1, 530_1)

3fm 0ft (17324_1, 531_1)

5.5m (500_1, 50_1)

Office Notes

Remove charted rock

1.30) Profile/Beam - 4/1 from H11120 / R2SB_2003 / 2003-170 / DP2170

Survey Summary

Survey Position: 57.11624508° N, 135.39262161° W
Least Depth: 2.20 m
Timestamp: 2003-170.18:06:37.000 (06/19/2003)
DP Dataset: H11120 / R2SB_2003 / 2003-170 / DP2170
Profile/Beam: 4/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

2170115 Chd (17324) piles disproval

Two charted piles were disproved visually by Hydrographer during shoreline verification and with 100% SWMB. The inshore pile also has a disproval position at DP#2170115. The offshore charted pile located at 57:06:59.074N , 135:23:37.222W (476160.01E , 6330412.97N) was disproved with 100% SWMB. See also DP#51771515 for disproval of third pile and positioning information on loading dock in the area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R2SB_2003/2003-170/DP2170	4/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

1 ¼fm (17320_1, 16016_1, 530_1)

1fm 1ft (17324_1, 531_1)

2.2m (500_1, 50_1)

Office Notes

Remove charted dols and chart new loading dock at the survey position, see smooth sheet for depiction.

1.31) Profile/Beam - 353/227 from h11120 / r4re_2003 / 2003-175 / 487_1907

Survey Summary

Survey Position: 57.06714598° N, 135.41306222° W
Least Depth: 0.40 m
Timestamp: 2003-175.19:07:23.172 (06/24/2003)
Survey Line: h11120 / r4re_2003 / 2003-175 / 487_1907
Profile/Beam: 353/227
Charts Affected: 17327_1, 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Revised position submerged Chd(17327) rk

Submerged feature found in subset mode, VBES search conducted initially, DP#2170213.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11120/r4re_2003/2003-175/487_1907	353/227	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

0 ¼fm (17327_1, 17320_1, 16016_1, 530_1)

0fm 1ft (17324_1, 531_1)

.4m (500_1, 50_1)

Office Notes

[None]

1.32) Profile/Beam - 2/1 from H11120 / R5NE_2003 / 2003-177 / DP5177

Survey Summary

Survey Position: 57.11628965° N, 135.39302423° W
Least Depth: -2.75 m
Timestamp: 2003-177.22:41:37.000 (06/26/2003)
DP Dataset: H11120 / R5NE_2003 / 2003-177 / DP5177
Profile/Beam: 2/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

51771515 New loading dock

The charted pile at 57:06:58.153N , 135:23:35.968W (476180.94E , 6330384.39N) was disproved during shoreline verification. A new loading dock was located in the area, the NE extent was positioned at DP#51771515.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R5NE_2003/2003-177/DP5177	2/1	0.00	000.0	Primary

Hydrographer Recommendations

The Hydrographer recommends removal of the charted piles and charting the area with data from the present survey.

Cartographically-Rounded Depth (Affected Charts):

-1 ½fm (17320_1, 16016_1, 530_1)
 -1fm 3ft (17324_1, 531_1)
 -2.8m (500_1, 50_1)

Office Notes

Remove charted piles. chart new dols and loading dock as positioned by the hydrographer. See smooth sheet for a depiction of the area.

1.33) Profile/Beam - 4/1 from H11120 / R5NE_2003 / 2003-177 / DP5177

Survey Summary

Survey Position: 57.11257660° N, 135.40588936° W
Least Depth: -4.87 m
Timestamp: 2003-177.23:15:53.000 (06/26/2003)
DP Dataset: H11120 / R5NE_2003 / 2003-177 / DP5177
Profile/Beam: 4/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

51771524 CFF rk is part of lidar islet

During lidar verification, CFF rock and charted islet extents were visually observed to be the lidar islet by Hydrographer. The lidar data more accurately represents the MHW in this area. The lidar MHW was copied digitally and added to the H11120_Shoreline_Updates table as a change to MHW.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R5NE_2003/2003-177/DP5177	4/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-2 ½fm (17320_1, 16016_1, 530_1)

-2fm 4ft (17324_1, 531_1)

-4.9m (500_1, 50_1)

Office Notes

Chart lidar islets and shown on the smooth sheet.

1.34) Profile/Beam - 7/1 from H11120 / R5NE_2003 / 2003-177 / DP5177

Survey Summary

Survey Position: 57.10901269° N, 135.44417756° W
Least Depth: -3.97 m
Timestamp: 2003-177.23:42:21.000 (06/26/2003)
DP Dataset: H11120 / R5NE_2003 / 2003-177 / DP5177
Profile/Beam: 7/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

51771536 Chd(17324) islet is lidar islet

During lidar verification, the charted islet's highpoint was positioned with DP#51771536, and observed to be the verified lidar MHW. The lidar islet was copied digitally and added to the H11120_Shoreline_Updates table as a change to MHW.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R5NE_2003/2003-177/DP5177	7/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-2fm (17320_1, 16016_1, 530_1)

-2fm 1ft (17324_1, 531_1)

-4.0m (500_1, 50_1)

Office Notes

Revise charted islet limits as shown on the smooth sheet.

1.35) Profile/Beam - 6/1 from H11120 / R5NE_2003 / 2003-177 / DP5177

Survey Summary

Survey Position: 57.11143143° N, 135.40532638° W
Least Depth: -4.83 m
Timestamp: 2003-177.23:25:10.000 (06/26/2003)
DP Dataset: H11120 / R5NE_2003 / 2003-177 / DP5177
Profile/Beam: 6/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

51771530 Revised position Chd (17324) islet

During lidar verification, CFF islet and charted islet extents were visually disproved by Hydrographer, DP#51771530. The Lidar data more accurately represents the MHW in this area. The lidar MHW was copied digitally and added to the H11120_Shoreline_Updates table as a change to MHW.

The lidar MLLW was verified to extend on the western side of the islets. The CFF rock at 57°06'41.098"N , 135°24'16.258"W (475497.89E , 6329858.42N) was observed to be the extent of the charted ledge. The existing charted ledge as well as lidar MLLW were copied digitally and added to the H11120_Shoreline_Updates table as ledge along with Hydrographer updates were used to accurately portray the ledge.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R5NE_2003/2003-177/DP5177	6/1	0.00	000.0	Primary

Hydrographer Recommendations

Revise charted limits of islets as shown on this survey.

Cartographically-Rounded Depth (Affected Charts):

-2 ½fm (17320_1, 16016_1, 530_1)

-2fm 4ft (17324_1, 531_1)

-4.9m (500_1, 50_1)

Office Notes

Revise charted islet with lidar islets. See smooth sheet for depiction of the area.

1.36) Profile/Beam - 5/1 from H11120 / R5NE_2003 / 2003-177 / DP5177

Survey Summary

Survey Position: 57.11229230° N, 135.40425569° W
Least Depth: -4.36 m
Timestamp: 2003-177.23:19:23.000 (06/26/2003)
DP Dataset: H11120 / R5NE_2003 / 2003-177 / DP5177
Profile/Beam: 5/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

During lidar verification, CFF rock and charted islet extent were visually observed, by Hydrographer, to be the lidar islet. The highpoint of the islet was positioned for height information in the vicinity of the CFF rock, DP#51771525. The lidar data more accurately represents the MHW in this area. The lidar MHW was copied digitally and added to the H11120_Shoreline_Updates table as a change to MHW.

The surrounding ledge was positioned at DP#1153133 and the lidar MLLW was verified as ledge. The lidar MLLW was copied digitally and added to the H11120_Shoreline_Updates table as ledge along with Hydrographer updates were used to accurately portray the ledge.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R5NE_2003/2003-177/DP5177	5/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-2 ¼fm (17320_1, 16016_1, 530_1)
 -2fm 2ft (17324_1, 531_1)
 -4.4m (500_1, 50_1)

Office Notes

Revise charted limits of islets as shown on this survey.

1.37) Profile/Beam - 3/1 from H11120 / R5NE_2003 / 2003-177 / DP5177

Survey Summary

Survey Position: 57.11307966° N, 135.39590305° W
Least Depth: -4.51 m
Timestamp: 2003-177.22:47:50.000 (06/26/2003)
DP Dataset: H11120 / R5NE_2003 / 2003-177 / DP5177
Profile/Beam: 3/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

51771516 Dol, ext fltg dock

During shoreline verification, a detached position was taken on a dolphin at the seaward extent of a new floating dock extension. The dock extends off of the verified CFF pier.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R5NE_2003/2003-177/DP5177	3/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-2 ½fm (17320_1, 16016_1, 530_1)
 -2fm 3ft (17324_1, 531_1)
 -4.5m (500_1, 50_1)

Office Notes

Chart new dolphin and floating pier at survey position. See smooth sheet for depiction on the area.

1.38) Profile/Beam - 8/1 from H11120 / R5NE_2003 / 2003-177 / DP5177

Survey Summary

Survey Position: 57.09054351° N, 135.43598775° W
Least Depth: -3.22 m
Timestamp: 2003-177.23:53:56.000 (06/26/2003)
DP Dataset: H11120 / R5NE_2003 / 2003-177 / DP5177
Profile/Beam: 8/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

51771539 ext MHW

Lidar verification, lidar flyers in area, disproved with DP#51771539 and 100% SWMB.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R5NE_2003/2003-177/DP5177	8/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-1 ¾fm (17320_1, 16016_1, 530_1)

-1fm 4ft (17324_1, 531_1)

-3.2m (500_1, 50_1)

Office Notes

Chart cff shoreline in the area

1.39) Profile/Beam - 1/1 from H11120 / R5NE_2003 / 2003-177 / DP5177

Survey Summary

Survey Position: 57.11764923° N, 135.38888890° W
Least Depth: 9998.42 m
Timestamp: 2003-177.22:36:26.000 (06/26/2003)
DP Dataset: H11120 / R5NE_2003 / 2003-177 / DP5177
Profile/Beam: 1/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

51771512 fltg boat house

CFF pile is connected to the dock of the floating boat house. CFF pile was removed from the plot and DP#51771512 was used to position the boat house.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R5NE_2003/2003-177/DP5177	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

5467fm (17320_1, 16016_1, 530_1)

5467fm (17324_1, 531_1)

9998m (500_1, 50_1)

Office Notes

Remove charted pile, chart new pile and boathouse as depicted on the smooth sheet.

1.40) Profile/Beam - 1/1 from H11120 / R5NE_2003 / 2003-178 / DP5177

Survey Summary

Survey Position: 57.08317625° N, 135.40139623° W
Least Depth: -3.36 m
Timestamp: 2003-178.00:09:34.000 (06/27/2003)
DP Dataset: H11120 / R5NE_2003 / 2003-178 / DP5177
Profile/Beam: 1/1
Charts Affected: 17324_1, 17320_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

51771546 Chd(17324) rk is Lidar islet

The three charted (17324) rocks were observed to be uncovered and connected at low water. The extents were positioned with DP#71261486 and 71261487.

During lidar low water verification, the lidar MLLW was found to more accurately, than the charted rocks, represent the uncovered areas at low water.

During lidar high water verification, the lidar islet was verified and the highpoint was positioned with DP#51771546. The lidar islet was copied digitally and added to the H11120_Shoreline_Updates table as a change to MHW.

The DPBS plot depicts the area as observed in the field by the Hydrographer.

Feature Correlation

Address	Feature	Range	Azimuth	Status
H11120/R5NE_2003/2003-178/DP5177	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Cartographically-Rounded Depth (Affected Charts):

-1 ¾fm (17320_1, 16016_1, 530_1)

-1fm 5ft (17324_1, 531_1)

-3.4m (500_1, 50_1)

Office Notes

Retain charted islet



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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: October 15, 2003

HYDROGRAPHIC BRANCH: Pacific
HYDROGRAPHIC PROJECT: OPR-O112-RA-2003
HYDROGRAPHIC SHEET: H11120

LOCALITY: Sitka Sound, Alaska
TIME PERIOD: May 6 - June 27, 2003

TIDE STATION USED: 945-1600 Sitka
Lat. 57° 03.1' N Lon. 135° 20.5' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 2.791 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: SEA200

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 on the new 1983-2001 National Tidal Datum Epoch (NTDE).

Thomas V. Mero 10/12/03
CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

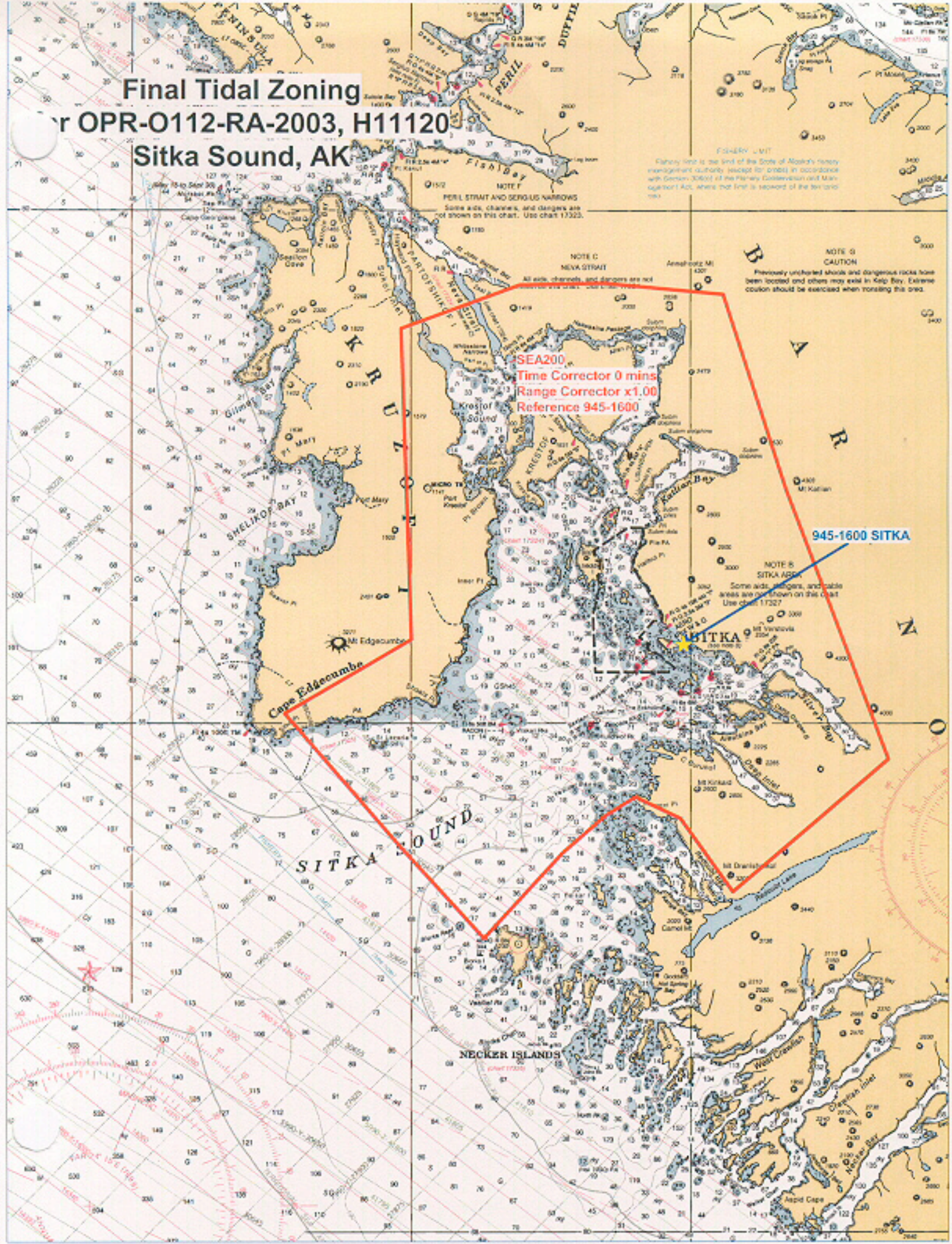


Final tide zone node point locations for OPR-O112-RA-2003, H11120

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 SEA200	945-1600	0	1.00
-135.578921 56.858887			
-135.484815 56.914845			
-135.434312 56.939104			
-135.398646 56.951288			
-135.345146 56.937479			
-135.283101 56.889312			
-135.096503 56.976245			
-135.219418 57.152377			
-135.294235 57.2785			
-135.435854 57.285735			
-135.536277 57.284567			
-135.677763 57.256337			
-135.665367 57.054404			
-135.816846 57.006056			
-135.678821 56.918667			
-135.578921 56.858887			

Final Tidal Zoning for OPR-O112-RA-2003, H11120 Sitka Sound, AK



SEA200
Time Corrector 0 mins
Range Corrector x1.00
Reference 945-1600

945-1600 SITKA

NOTE 9 CAUTION
Previously uncharted shoals and dangerous rocks have been located and others may exist in Kelp Bay. Extreme caution should be exercised when transiting this area.

NOTE 6 SITKA AREA
Some aids, dangers, and cable areas are not shown on this chart. Use chart 17327.

NOTE
PERIL STRAIT AND SERGIS NARROWS
Some aids, dangers, and dangers are not shown on this chart. Use chart 17323.

NOTE C NEVA STRAIT
All aids, channels, and dangers are not shown on this chart. Use chart 17327.

MEASURE TO 1/2 S. 1400
MEASURE TO 1/2 S. 1400
MEASURE TO 1/2 S. 1400

APPROVAL SHEET
H11120

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 disproof 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
Bruce Olmstead
Cartographic Team
Pacific Hydrographic Branch

Date: 10/3/2006

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.

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

Date: 5 Oct. 2006

