H10949

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-20-01-00

Registry No. H-10949

LOCALITY

State Alaska

General Locality Northern Clarence Strait

Sublocality Snow Passage and Approaches

2000

CHIEF OF PARTY
Commander Daniel R. Herlihy, NOAA

LIBRARY & ARCHIVES

DATE March 1, 2002

NOAA FORM 77-28
(11-72)

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

REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H-10949

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-20-01-00

State **Alaska**

General Locality **Northern Clarence Strait**

Sublocality **Snow Passage and Approaches**

Scale **1:20,000** Date of Survey **3/22/00-5/8/00**

Instructions Date **3/16/00** Project No. **OPR-O327**

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

Chief of Party **Commander Daniel R. Herlihy, NOAA**

Surveyed by **RAINIER Personnel**

SEABEAM 1050D HF&LF

Soundings taken by echo sounder, hand lead, pole **Knudsen 320M, RESON 8101MB**

Graphic record scaled by **RAINIER Personnel**

Graphic record checked by **RAINIER Personnel**

Evaluation by **I. Almacen** Automated plot by **HP Design Jet 750c**

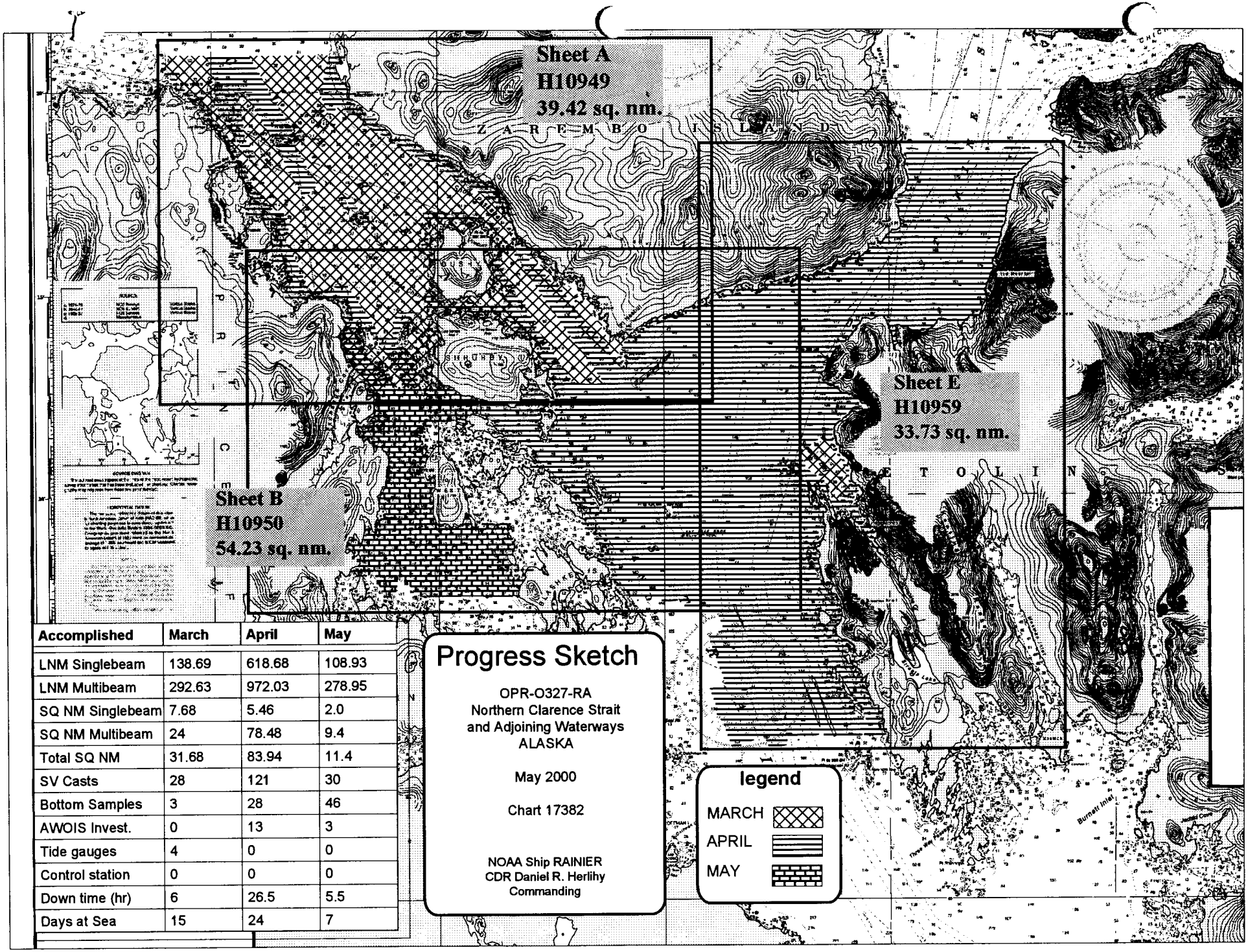
Verification by **E. Domingo, R. Davies, R. Mayor, G. Nelson, I. Almacen**

Soundings in **Fathoms** at **MLLW**

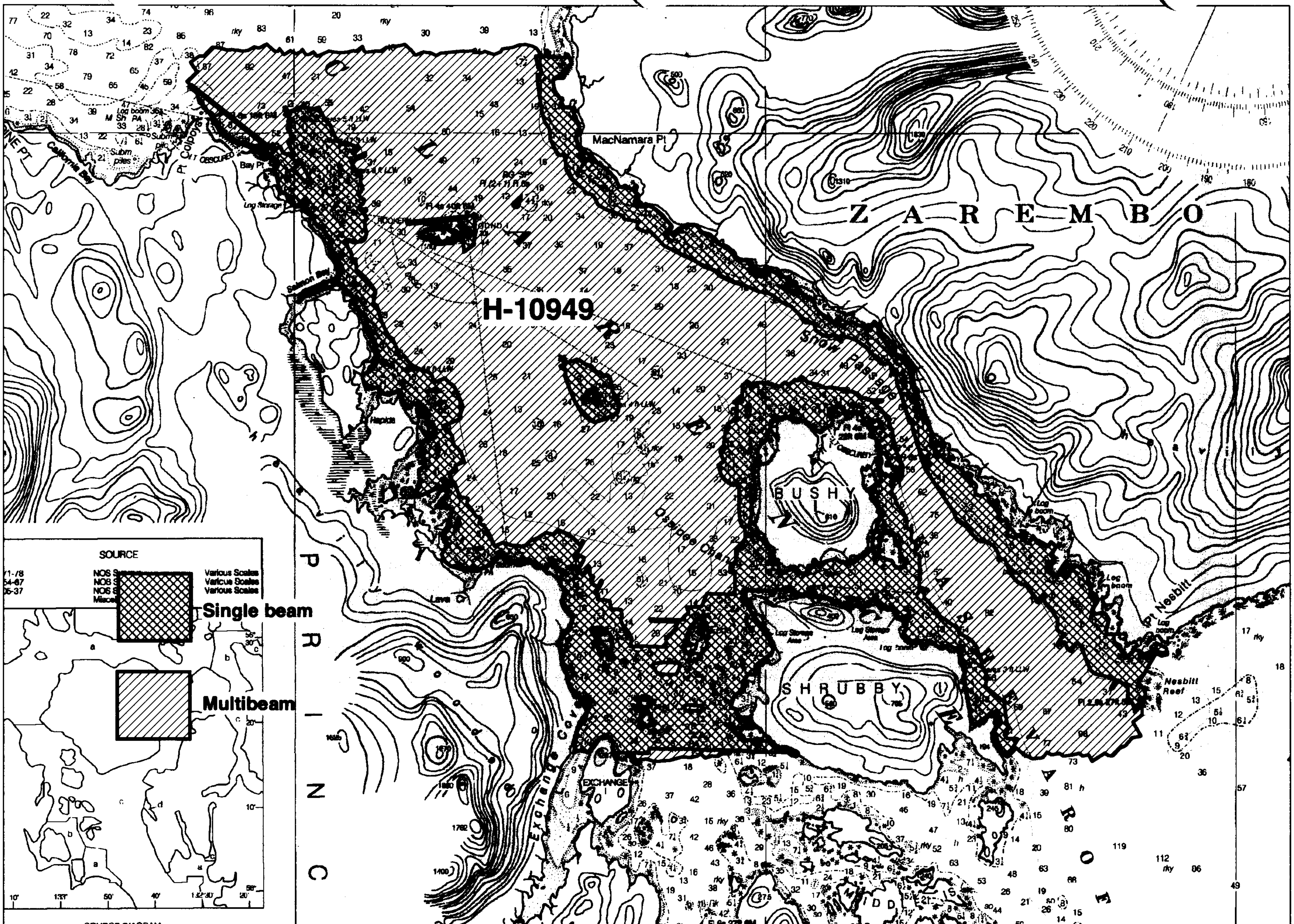
REMARKS: **Time in UTC. Revisions and marginal notes in black were generated during office processing. All separates are filed with the hydrographic data, as a result page numbering may be interrupted or non-sequential.**

All depths listed in this report are referenced to mean lower low water unless otherwise noted.

AWOIS / SURF 2/26/02 mcR



Accomplished	March	April	May
LNM Singlebeam	138.69	618.68	108.93
LNM Multibeam	292.63	972.03	278.95
SQ NM Singlebeam	7.68	5.46	2.0
SQ NM Multibeam	24	78.48	9.4
Total SQ NM	31.68	83.94	11.4
SV Casts	28	121	30
Bottom Samples	3	28	46
AWOIS Invest.	0	13	3
Tide gauges	4	0	0
Control station	0	0	0
Down time (hr)	6	26.5	5.5
Days at Sea	15	24	7



H-10949
Z A R E M B O
BUSHY I
SHRUBBY I
P R I N C
MacNamara Pt
Pt Nesbitt
Nesbitt Reef
Bay Pt
Lava Cr
Exchange Cove
EXCHANGE
SOURCE
Various Scales
Single beam
Multibeam
SOURCE DIAGRAM

Descriptive Report to Accompany Hydrographic Survey H10949

Project OPR-O327-RA-00 Northern Clarence Strait
Scale 1: 20,000
March-May 2000
NOAA Ship RAINIER
Chief of Party: Commander Daniel R. Herlihy, NOAA

A. AREA SURVEYED (See EVAL RPT, Sec. B)

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-O327-RA-00, dated March 16, 2000, and the Draft Standing Project Instructions dated April 6, 1998. The survey area is located in the region of Snow Passage and its approaches. The survey's northern limit is latitude 56°20'53"N and the southern limit is latitude 56°12'42"N. The survey's western limit is the Eastern Shore of Prince of Wales Island and the eastern limit is the western shore of Zarembo Island. Data acquisition was conducted from March 22, 2000 to May 8, 2000 (DN 082 to 129).

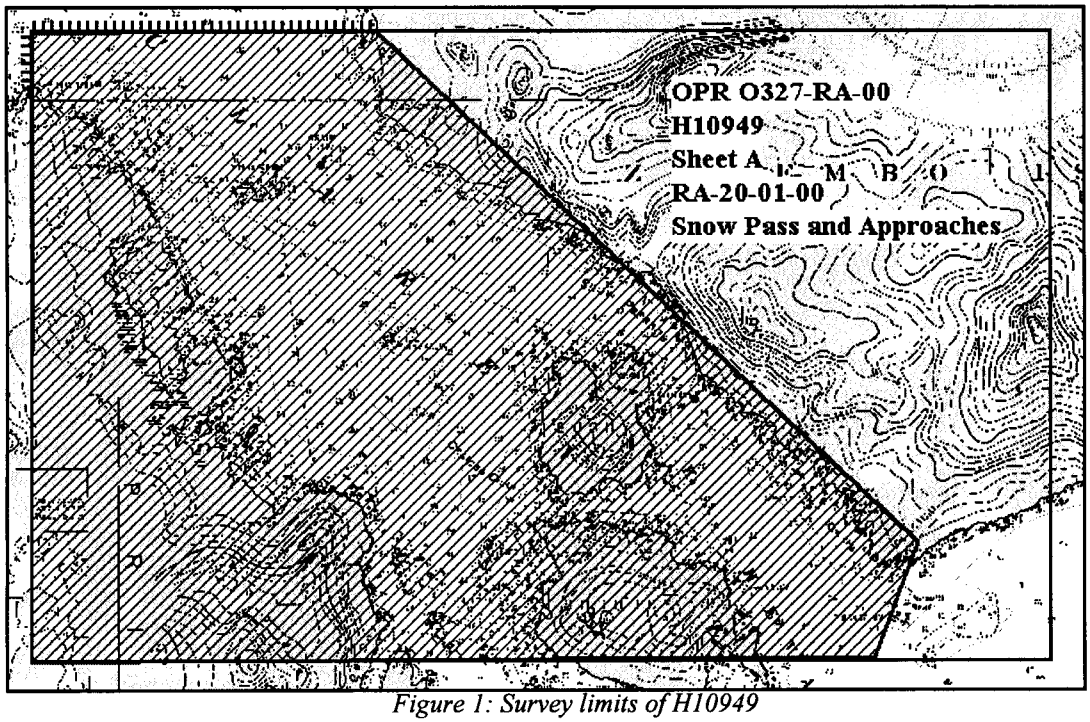


Figure 1: Survey limits of H10949

B. DATA ACQUISTION 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-O327-RA-00 Data Acquisition and Processing Report* submitted under separate cover. Items specific to this survey and any deviations from the aforementioned report are discussed in the following section.

B1. Equipment and Vessels ✓

Data were acquired by RAINIER survey launches (vessel numbers 2121, 2122, 2124, 2125 and 2126). Vessels 2121, 2124 and 2126 were used to acquire shallow-water multibeam (SWMB) data and sound velocity profiles. Vessels 2121, 2122, 2124, 2125 and 2126 were used to acquire vertical beam echo sounder (VBES) data. Vessel 2125 was also used to collect bottom samples. No unusual vessel configurations or problems were encountered on this survey.

B2. Quality Control ✓

Crosslines ✓

Vertical beam echo sounder (VBES) crosslines totaled 32.37 nautical miles, comprising 11.8% of mainscheme hydrography. Crosslines agreed within 1 meter of mainscheme hydrography.

Shallow-water multibeam (SWMB) crosslines totaled 39.51 nautical miles, comprising 8.1% of SWMB hydrography. The Quality Control Report (CARIS HIPS) for the checkline file averaged 95.81%, with a depth tolerance factor of 0.013, which conforms to NOAA depth accuracy requirements as outlined in the Hydrographic Surveys Specifications and Deliverables, and International Hydrographic Organization Order 1 specifications as detailed in Special Publication S-44, Edition 4. See Appendix V* for the detailed report.

Junctions ✓

The following contemporary survey has a junction with H10949:

Registry #	Scale	Date	Junction side
H10950	1:20,000	2000	South ✓

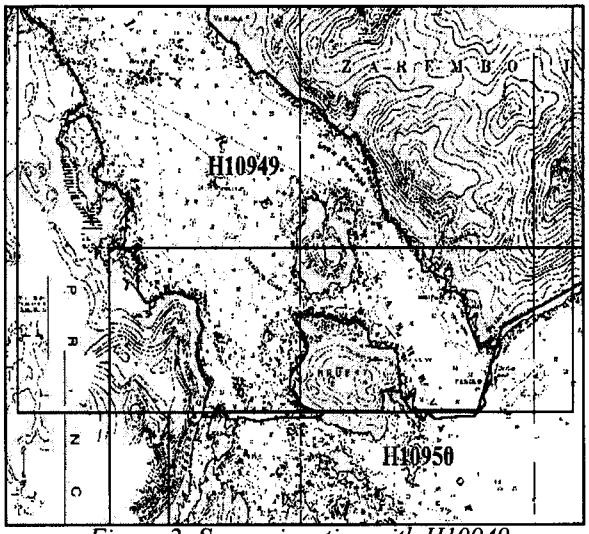


Figure 2: Survey junction with H10949

* Filed with the hydrographic data.

Survey H10950 compares very well with this survey at the junction, with differences generally one fathom or less. Final comparisons will be made at the Pacific Hydrographic Branch (PHB) after the application of smooth tides. Junction with this survey is complete.

Data Quality Factors ✓

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

B3. Data Reduction ✓

Data reduction procedures for survey H10949 conform to those detailed in the *OPR-O327-RA-00 Data Acquisition and Processing Report.* **

C. VERTICAL AND HORIZONTAL CONTROL (See EVAL RPT Secs. G, H & I)

A complete description of vertical and horizontal control for survey H10949 can be found in the *OPR-O327-RA-00 Vertical and Horizontal Control Report* ** submitted under separate cover. A summary of horizontal and vertical control for this survey follows.

Horizontal Control ✓

The horizontal datum for this project is the North American Datum of 1983 (NAD83). Differential GPS was the sole method of positioning. The US Coast Guard Beacons at Annette Island, AK, Sitka, AK, and Point Gustavus, AK, were the sources of differential correctors. Launch-to-launch DGPS performance checks were performed in accordance with Section 3.2 of the Field Procedures Manual (FPM). Copies of the performance checks are included in the *Separates to be Included with the Survey Data for OPR-O327-RA-00.* *

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 Ketchikan, Alaska (945-0460) will serve as control for datum determination. RAINIER personnel installed Sutron 8200 "bubbler" tide gauges at the following subordinate stations in accordance with the Project Instructions:

Station Name	Station Number	Type of Gauge	Date of Installation	Date of Removal
Bushy Island	945-1074	30-day	20 March 2000	10 May 2000
Point Harrington	945-1005	30-day	21 March 2000	10 May 2000
Burnett Inlet	945-0949	30-day	22 March 2000	25 April 2000
Stikine Strait	945-1124	30-day	24 March 2000	26 April 2000

Raw water level data from these gauges was forwarded to N/OPS1 throughout the project period, with the final package submitted on May 22, 2000 in accordance with Hydrographic Survey Guideline (HSG) 50 and FPM 4.7. The Pacific Hydrographic Branch will apply final approved (smooth) tides to the survey data during final processing. A request for delivery of final approved (smooth) tides for survey H10949 was forwarded to N/OPS1 on May 12, 2000 in accordance with FPM 4.8. Field tide notes, final tide notes, and a copy of the "Request for Approved Tides/Water Levels" are included in Appendix IV* of this report.

* Filed with the hydrographic data.
** Filed with the project reports for OPR0327.

Approved Tide Note dated August 9, 2000 is attached to this report.

D. RESULTS AND RECOMMENDATIONS ✓

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

A total of 11 AWOIS items was within the limits of H10949 and investigated during this survey. Investigation methods, results, and charting recommendations have been entered into the Microsoft Access AWOIS database and are submitted with the digital data. Printouts of the AWOIS Database Forms are included in ~~Appendix VI of~~ this report.

D.2 Chart Comparison (See EVAL RPT., Sec. 0)

Survey H10949 was compared with chart 17382 (14th Ed.; April 26, 1997, 1:80,000) and chart 17360 (31st Ed.; March 27, 1999, 1:217,828). The following comparisons address items not otherwise submitted as dangers to navigation (refer to section D.4).

Survey depths were generally 1-5 fathoms deeper than depths from Chart 17382. This trend was significantly different in two locations: Kashevarof Passage (just west of Bushy and Shrubby Islands) and along the western shore of Zarembo Island. In the vicinity of Kashevarof Passage the soundings were shoaler by as much as 8-10 fathoms. Along the western shore of Zarembo Island the 10-fathom curve tended to be 200 to 500 meters further offshore than depicted on Chart 17382. Other notable differences are:

An 8-fathom sounding on chart 17382 located at 56°16'11.688"N, 133°04'35.051"W (619,124.5 E, 6,237,784.2 N) in the vicinity of an 8.9-fathom sounding from the current survey. This area was covered with 100% SWMB.

A 6 ½-fathom sounding on chart 17382 located at 56°16'43.963"N, 133°00'39.335"W (623,149.9 E, 6,238,897.0 N) in the vicinity of a 10.7-fathom sounding from the current survey. This area was covered with 100% SWMB and near shore.

A 12-fathom sounding on chart 17382 located at 56°16'57.832"N, 132°59'34.359"W (624,254.7 E, 6,239,358.1 N) in the vicinity of a 18.4-fathom sounding from the current survey. This area was covered with 100% SWMB.

A 4 ½-fathom sounding on chart 17382 located at 56°19'11.763"N, 133°05'01.643"W (618,512.2 E, 6,243,337.7 N) in the vicinity of a 5.2-fathom sounding from the current survey. This area was covered with 100% SWMB.

A 20-fathom sounding on chart 17382 located at 56°19'00.622"N, 133°04'38.730"W (618,915.4 E, 6,243,004.3 N) in the vicinity of a 26.2-fathom sounding from the current survey. This area was covered with 100% SWMB.

A 1 ¾-fathom sounding on chart 17382 located at 56°19'07.772"N, 133°08'52.435"W (614,551.1 E, 6,243,105.8 N) in the vicinity of a 4.4-fathom sounding from the current survey. This area was not covered with 100% SWMB because of its proximity to shoal areas and submerged rocks. The area was covered by VBES at 50-meter line spacing.

A 1 ¼-fathom sounding on chart 17382 located at 56°19'35.147"N, 133°09'17.788"W (614,092.9 E, 6,243,940.3 N) in the vicinity of a 3.3 fathom sounding from the current survey. This area was not

covered with 100% SWMB because of its proximity to shoal areas and submerged rocks. The area was covered by VBES at 50-meter line spacing.

A 7-fathom sounding on chart 17382 located at 56°20'52.093"N, 133°05'11.654"W (618,254.0 E, 6,246,434.2 N) in the vicinity of a 22.5-fathom sounding from the current survey. This area was covered with 100% SWMB and is near shore.

Depths from chart 17360 were generally 2-8 fathoms deeper than survey depths. This trend was significantly different as well in Kashevarof Passage and along the western shore of Zarembo Island, where the same trends were noted as with chart 17382. *Concur.*

A 8-fathom sounding on chart 17360 located at 56°16'16.634"N, 133°04'40.018"W (619,034.8 E, 6,237,934.7 N) in the vicinity of a 9.6-fathom sounding from the current survey. This area was covered with 100% SWMB.

A 4 ½-fathom sounding on chart 17360 located at 56°19'11.763"N, 133°05'01.643"W (618,512.2 E, 6,243,337.7 N) in the vicinity of a 5.2-fathom sounding from the current survey. This area was covered with 100% SWMB.

A 7-fathom sounding on chart 17360 located at 56°20'52.093"N, 133°05'11.654"W (618,254.0 E, 6,246,434.2 N) in the vicinity of a 22.5-fathom sounding from the current survey. This area was covered with 100% SWMB and is near shore.

A 1 ¼-fathom sounding on chart 17360 located at 56°19'39.664"N, 133°09'12.877" W (614,173.5 E, 6,244,082.2 N) in the vicinity of a 1.7-fathom sounding from the current survey. This area was not covered with 100% SWMB because of its proximity to shoal areas and submerged rocks. The area was covered by VBES at 50-meter line spacing with soundings every 50 meters.

Piles located at 56°19'54.99"N, 133°11'18.91"W (611996.5 E, 6244498.4 N) and 56°19'21.39"N, 133°10'19.03"W (613047.7 E, 6243486.9 N) on chart 17382 were not found during shoreline verification, although no specific disprovals were conducted. *Delete piles at its charted locations.*

D.3 Shoreline *(See ExAc. Rpt., Sec. J)*

Method ✓

N/NGS3 supplied photogrammetric shoreline data in raster format for T-13376, T-13377, T-13378, TP00564, TP00565, TP00566, TP00571, TP00572, and TP00573 for use as source shoreline. The T-sheet raster images were registered and digitized in MapInfo by RAINIER personnel and the resultant vector data were used in Hypack for field verification. In addition, features shown on the current editions of charts 17382 and 17360 were digitized in MapInfo by RAINIER personnel and displayed in Hypack for field verification. *The digital shoreline topo maps GC-10843 and GC-10836 were used in the final compilation of the shoreline for this survey.*

Shoreline verification was conducted near predicted low water and in accordance with the Draft Standing Project Instructions and FPM 6.1 and 6.2. For this survey a buffer line was run along the general limit of safe navigation of a survey launch, which was generally 5-30 meters offshore of the apparent low-water line. Water depths along this limit of safe navigation were approximately 4 meters at Mean Lower-Low Water (MLLW). Features unreachable by survey launch are depicted as the Hydrographer's approximate representation of the shoreline. The Hydrographer did not specifically address several features inshore of

the approximate 4-meter curve. Rocky regions inshore of the safe navigation limit of RAINIER's survey launches were noted as "foul," with the limits defined by detached positions (DPs) or the buffer line.

Detached positions taken during shoreline verification were recorded in HYPACK and on DP forms, and processed in HPS. These indicate revisions to features, and features not found on the T-sheet or chart. In addition, hard copies of applicable T-sheets were taken into the field and annotated by hand to reflect verification of source features and updates to both the chart and T-sheet. DP forms are included in Section V of the *Separates to be included with Survey Data.** In addition, digital photographs were taken to supplement many of the DPs and are included with the HPS project CD. The name of each digital image file corresponds to its respective position number.

* Filed with the hydrographic data.

A detailed Detached Position and Bottom Sample Plot, in both paper copy and MapInfo format, is provided showing all detached positions and bottom samples with notes relating to each feature. The updated shoreline and features are also depicted on the final sounding plot. Two insets at a larger scale are provided to clearly detail the shoreline around Bushy Island and in Kashevarof Passage.

Changes to Source Data

Several changes and new features were found and are adequately depicted on the final DP plot. T-sheet rocks were often identified as high points, extents of new ledges or foul area limits. Disprovals of T-Sheet features are listed below.

Two T-Sheet rocks at 56°18'49.765"N, 133°01'47.272"W (621870.4 E , 6242752.0 N), Pos. #53719, were disproved using a 10-minute visual and echosounder search in a star pattern over a 50-meter radius in water with 4 meters of visibility. Corrected depth from the echosounder is 6.0 meters. (3.3 fms) Chart the area based on the present survey.

The T-Sheet rock at 56°13'11.602"N, 133°02'33.721"W (621369.5 E, 6232276.5 N), Pos. #27601, was disproved using a 5-minute visual search in a grid pattern over a 50-meter radius in water with 4 meters of visibility. Corrected depth from the echosounder is 3.7 meters. (2.0 fms) Chart the area based on the present survey.

The T-Sheet rock at 56°13'10.371"N, 133°02'39.712" W (621267.4 E, 6232235.5 N), Pos. #27603, was disproved using a 5-minute visual search in a grid pattern over a 50-meter radius in water with 4 meters of visibility. Corrected depth from the echosounder is 1.0 meters. (0.5 fm.) Chart the area based on the present survey.

Charted Features

The charted (17382) rock at 56°14'00.906"N, 132°52'51.545"W (631348.7 E, 6234097.0 N), Pos. #20765, was disproved using a 15-minute echosounder and visual search in a grid pattern over a 50-meter radius in water with 4 meters of visibility. Corrected depth from the echosounder is 13.0 meters. The Hydrographer recommends removing this rock from the chart. Concur. Chart the area based on this survey.

The charted (17382) rock at 56°16'52.719"N, 133°07'03.356"W (616539.0 E, 6238982.0 N), Pos. #27040, was disproved using a 5-minute echosounder and visual search in a grid pattern over a 50-meter radius in water with 4 meters of visibility. Corrected depth from the echosounder is 8.6 meters. The Hydrographer recommends removing this rock from the chart. Concur. Chart the area based on the present survey.

The charted (17382) rock at 56°17'57.537"N, 133°08'33.567" W (614933.8 E, 6240943.5 N), Pos. #27085, was disproved using a 5-minute visual search in a grid pattern over a 50-meter radius in water with 4 meters of visibility. Corrected depth from the echosounder is 10.4 meters. The Hydrographer recommends removing this rock from the chart. Concur. Chart the area based on the present survey.

The charted (17360) rock at 56°20'09.620"N, 133°09'31.756"W (613824.5 E, 6244999.5 N), Pos. #27271, was disproved using a 5-minute visual search in a grid pattern over a 50-meter radius in water with 4 meters of visibility. Corrected depth from the echosounder is 10.3 meters. The Hydrographer recommends removing this rock from the chart. *Concur.*

The charted (17360) rock at 56°13'44.752" N, 133°03'11.988"W (620681.5 E, 6233282.5 N), Pos. #27605, was disproved using a 5-minute visual search in a grid pattern over a 50-meter radius in water with 4 meters of visibility. Corrected depth from the echosounder is 14.3 meters. The Hydrographer recommends removing this rock from the chart. *Concur. Chart the area based on the present survey.*

The charted (17360) rock at 56°13'48.048"N, 133°02'53.282"W (621000.7 E, 6233393.5 N), Pos. #27606, was disproved using a 5-minute visual search in a grid pattern over a 50-meter radius in water with 4 meters of visibility. Corrected depth from the echosounder is 14.6 meters. The Hydrographer recommends removing this rock from the chart. *Concur. Chart the area based on the present survey.*

The charted (17382 & 17360) rock at 56°13'42.191"N, 133°01'37.695"W (622307.3 E, 6233249.5 N), Pos. #27607, was disproved using a 5-minute visual search in a grid pattern over a 50-meter radius in water with 4 meters of visibility. Corrected depth from the echosounder is 8.7 meters. (4.7 fms) The Hydrographer recommends removing this rock from the chart. *Concur. Chart the area based on the present survey.*

The charted (17382 & 17360) rock at 56°14'45.799"N, 133°04'04.578" W (619723.1 E, 6235144.0 N), Pos. #54820, was disproved using a 10 minute visual search in a grid pattern over a 50-meter radius in water with 3-5 meters of visibility. Corrected depth from the echosounder is 15.8 meters. (8.6 fms) The Hydrographer recommends removing this rock from the chart. *Concur. Chart the area based on the present survey.*

The charted (17360) rock at 56°16'03.860" N, 133°00'19.005"W (623535.4 E, 6237667.5 N), Pos. #55194, was disproved using a 5-minute visual and echosounder search in a grid pattern over a 50 to 70-meter radius in water with 3-5 meters of visibility. Corrected depth from the echosounder is 15.8 meters. (8.6 fms) The Hydrographer recommends removing this rock from the chart. *Concur. Chart the area based on the present survey.*

Charted (17382) log booms located at 56°15'31.11"N, 132°54'06.41"W (629975.0 E, 6236845.7 N); 56°14'44.97"N, 132°52'43.54"W (631444.6 E, 6235463.2 N); and 56°14'05.8"N, 132°51'35.61"W (632651.2 E, 6234288.7 N); were not found during shoreline verification. Visual searches were conducted along the shoreline with the sole intent of proving or disproving their existence. The Hydrographer recommends removing them from the chart. *Concur. Remove the log booms charted on 17382*

The Hydrographer recommends that the shoreline as depicted on the DP and BS plot and final sounding plot supersede and complement shoreline information compiled on the T-sheets as noted. *Concur.* These revisions are recorded in the MapInfo digital files named "H10949_Shoreline" and "H10949_Shoreline_Updates". In addition, field notes made by the Hydrographer, including verification of source features and descriptions of shoreline classification, are submitted in the digital MapInfo file "H10949_Shoreline_Notes," and are depicted on the DP and BS plot in blue italics.

D.4 Dangers to Navigation ✓

Eighty-nine (89)

~~Ninety-one~~ dangers to navigation were found and reported to the Pacific Hydrographic Branch (PHB) for verification and final submission to the Seventeenth Coast Guard District on September 1, 2000.

A copy of the preliminary Danger to Navigation Report is included in *this report* ~~Appendix I~~. The final report will be inserted by PHB following verification and submission to the U.S. Coast Guard.

D.5 Aids to Navigation ✓

All aids to navigation within the survey limits were found to be correctly charted and serve their intended purpose. The red beacon R "2" marking Kashevarof Passage at 56°12'52.98"N, 133°01'22.03"W is depicted on chart 17382 as "position approximate" ("PA"). This marker was positioned with DGPS (Pos. # 56225) and was found to be adequately charted. *concur.*

D.6 Miscellaneous ✓

Project Instructions for project OPR-O327-RA-00 required 100% multibeam coverage with the possible exception of regions where there is no indication of shoaling. Near 100% SWMB coverage was obtained during this survey; however some bottom coverage gaps exist and were not addressed due to time constraints. Additionally, small holidays in coverage were created in the post-processing of data and therefore were not avoidable in the field. *The density of soundings compiled at the scale of this survey is adequate.*

Every effort was taken to minimize the impact of not having full bottom coverage. The majority of coverage gaps in the survey area are generally 20 meters or less in width, 150 meters or less in length, and within 500 meters of shore or a foul area. All of these holidays were closely examined by the Hydrographer, and with the exceptions noted below, were not deemed significant to navigation. *Concur.*

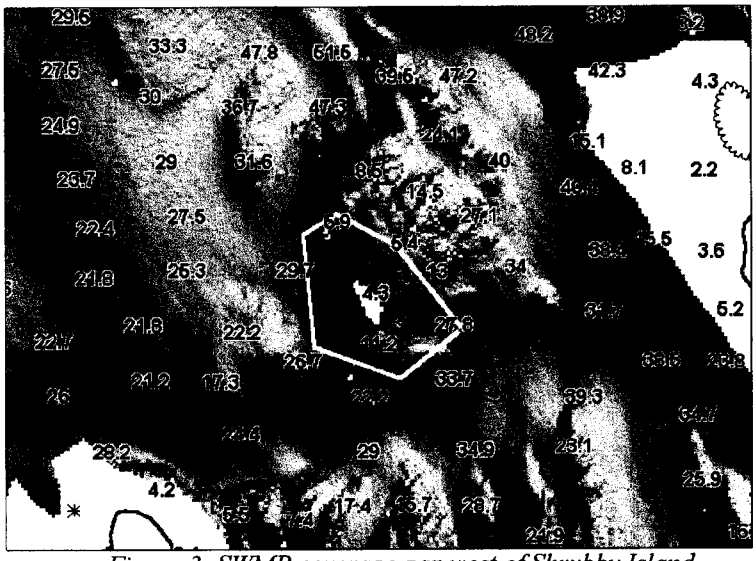


Figure 3: SWMB coverage gap west of Shrubby Island

Approximately 600 meters west of the northwestern tip of Shrubby Island at 56°14' 27.12"N, 133°00' 58.37"W (622944.4 E, 6234657.7 N), is a holiday approximately 30 meters by 80 meters in size. Depths surrounding the pinnacle are on the order of 20 meters with the shoalest depth measured being 4.3 meters. Examination of the rejected outer beams of the SWMB data indicate that the shoalest depth is 7 cm shoaler than the shoalest accepted sounding. Possible traffic in this area which could be affected by this coverage gap would be fishing vessels with a size on the order of 30 to 40 feet. Larger vessels tend to transit the region on the eastern shore of Shrubby Island. *(2.3 fms based on approved tide)* *The density of the soundings compiled as shown on the SS is adequate to portray the coverage of the shoal area located during this survey.*

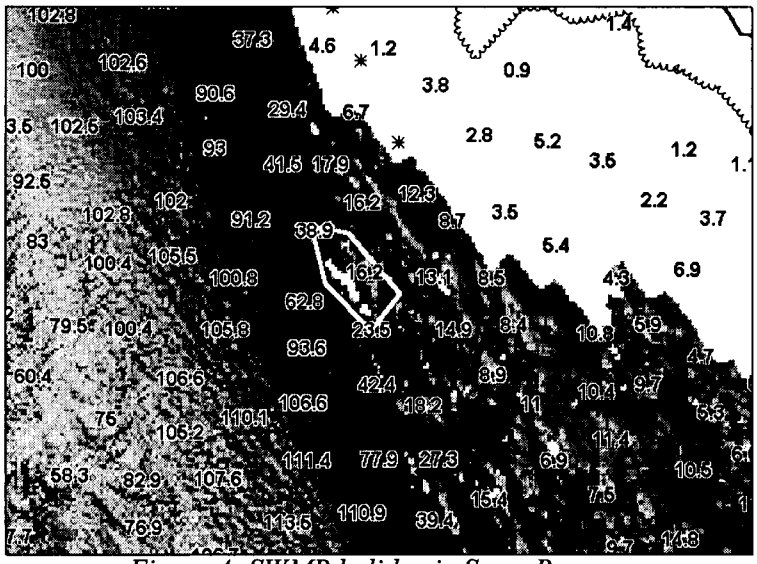


Figure 4: SWMB holiday in Snow Passage

At the southeastern edge of Snow Passage, at 56°15'57.2"N, 132°56'30.62"W (627,469.8E 6,237,577.3N) is a holiday approximately 22 meters wide and 120 meters long, with surrounding soundings of approximately 60 meters seaward and 15 meters shoreward. Examination of this holiday reveals no indication of shoaler soundings in this region. Concur. It appears to be a breakpoint where the gentle shoreward slope meets the cliff face that falls toward the submarine canyon at the pass. It is the Hydrographer's opinion that no shoaling exists in this gap; however it is noteworthy due to its proximity to a heavily trafficked passage. In this instance, outer beams from SWMB past 60° beyond nadir were accepted in an attempt to fill the hole. These outer beams were accepted in CARIS line mode and then reexamined in subset mode to ensure data quality. The density of soundings compiled in this area based on the scale of the survey is adequate enough to delineate and portray the steep bottom configuration along the south-eastern edge of Snow Passage.

Recommendations

It is recommended that the scale of future surveys in complex shoal regions with detailed shoreline be 1:10,000 or larger. With the complexity involved in H10949, many difficulties were encountered with data processing and presentation due to the density and volume of data and complex shoreline detail. Concur.

E. APPROVAL

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

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

Survey H10949 is complete and adequate to supersede charted soundings and features in their common areas. There is no additional work required on this survey. Concur

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

Title	Date Sent	Office
Data Acquisition and Processing Report for OPR-O327-RA-00	August 11, 2000	N/CS34
Vertical and Horizontal Report for OPR-O327-RA-00	TBD	N/CS34
Tides and Water Levels Package for OPR-O327-RA-00	May 22, 2000	N/OPS1
Coast Pilot Report for OPR-O327-RA-00	TBD	N/CS26

Approved and Forwarded: Daniel R. Herlihy

Daniel R. Herlihy
Commander, NOAA
Commanding Officer

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

Survey Sheet Manager:

Mark A. Wetzler
Lieutenant, NOAA

Field Operations Officer: E.J. Van Den Ameele

Edward J. Van Den Ameele
Lieutenant, NOAA

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

NOAA Ship RAINIER
September 1, 2000

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

ADVANCE
INFORMATION

Dear Sir or Madam:

It is requested that the following dangers to navigation be included in the Local Notice to Mariners. The NOAA Ship RAINIER positioned these features while conducting hydrographic survey H10949 from March through May 2000 in Northern Clarence Strait, Alaska. The dangers are shown graphically on the attached chartlets.

The following dangers to navigation affect chart the following charts:

Chart	Scale	Edition	Date
17382	1:80,000	14th	April 26, 1997
17360	1:217,828	31st	March 27, 1999

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

Feature	Depth(fm)	Latitude (N)	Longitude (W)	Depth (m)
Rock	-0.8	56°14'28.167"	133°10'24.265"	-1.5
Rock	0.0	56°14'59.869"	132°57'00.379"	0.0
Rock	0.3	56°14'54.536"	132°57'49.081"	0.5
Rock	0.4	56°13'29.500"	133°01'18.312"	0.7
Rock	0.7	56°14'50.321"	132°57'12.848"	1.2
Rock	0.7	56°14'40.393"	133°00'00.639"	1.2
Rock	0.9	56°16'04.039"	132°56'27.017"	1.6
Shoal	0.5	56°18'06.931"	133°09'38.980"	1.0
Shoal	0.6	56°19'14.909"	133°03'09.712"	1.2
Shoal	0.8	56°13'05.141"	133°00'43.969"	1.5
Shoal	1.0	56°14'48.032"	133°58'07.125"	1.8
Shoal	1.0	56°16'16.938"	133°00'32.348"	1.8
Shoal	1.0	56°14'16.355"	133°53'20.506"	1.9
Shoal	1.3	56°13'40.543"	133°00'48.542"	2.4
Shoal	1.5	56°20'20.947"	133°12'00.869"	2.9
Shoal	1.6	56°13'53.895"	133°01'07.727"	3.0
Shoal	1.6	56°18'59.071"	133°06'48.001"	3.0
Shoal	1.8	56°18'51.877"	133°02'28.649"	3.3
Shoal	1.8	56°18'40.390"	133°01'25.550"	3.3
Shoal	2.0	56°14'03.246"	133°00'23.713"	3.7
Shoal	2.0	56°14'33.075"	133°53'40.840"	3.8

ADVANCE INFORMATION

Shoal	2.3	56°05'23.698"	133°00'27.871"	4.2
Shoal	2.3	56°19'50.620"	133°04'24.097"	4.3
Shoal	2.5	56°13'41.032"	133°01'10.923"	4.6
Shoal	2.5	56°13'52.094"	133°00' 6.415"	4.7
Shoal	2.8	56°12'41.044"	133°01'23.224"	5.1
Shoal	2.8	56°18'31.090"	133°01' 0.964"	5.2
Shoal	2.9	56°19'48.044"	133°08'55.184"	5.4
Shoal	3.2	56°14'41.721"	133°02'43.125"	5.9
Shoal	3.3	56°13'27.839"	133°02'38.990"	6.0
Shoal	3.3	56°15'10.103"	133°54'44.043"	6.1
Shoal	3.3	56°13'17.617"	133°01'30.457"	6.1
Shoal	3.5	56°19'35.900"	133°09'44.524"	6.4
Shoal	3.5	56°14'41.650"	133°00'21.032"	6.5
Shoal	3.8	56°15'46.949"	133°56'13.134"	6.9
Shoal	3.7	56°16'50.842"	133°58'35.410"	6.9
Shoal	3.7	56°13'39.493"	133°03'16.361"	6.9
Shoal	3.8	56°14'43.088"	133°59'12.563"	7.1
Shoal	4.0	56°14'45.189"	133°57'42.598"	7.3
Shoal	4.0	56°14'54.300"	133°00'33.873"	7.4
Shoal	4.0	56°15'14.334"	133°06'13.889"	7.4
Shoal	4.2	56°13'57.680"	133°02'24.069"	7.7
Shoal	4.2	56°18'27.540"	133°08'16.351"	7.7
Shoal	4.2	56°12'43.755"	133°01'56.471"	7.8
Shoal	4.3	56°17'07.125"	133°04'01.189"	7.9
Shoal	4.7	56°04'39.923"	133°58'06.247"	8.6
Shoal	4.8	56°04'42.720"	133°57'20.958"	8.8
Shoal	4.9	56°08'11.733"	133°00'04.118"	9.1
Shoal	4.9	56°04'12.581"	133°00'58.588"	9.1
Shoal	5.3	56°08'13.674"	133°08'03.007"	9.7
Shoal	5.5	56°08'41.250"	133°01'43.171"	10.0
Shoal	5.5	56°08'52.890"	133°08'48.278"	10.1
Shoal	5.7	56°03'55.039"	133°02'49.546"	10.6
Shoal	5.8	56°03'56.960"	133°53'23.751"	10.7
Shoal	5.9	56°08'45.247"	133°08'41.704"	10.8
Shoal	6.0	56°05'29.373"	133°06'16.546"	11.1
Shoal	6.3	56°03'07.706"	133°01'23.465"	11.6
Shoal	6.4	56°05'20.274"	133°55'35.722"	11.8
Shoal	6.6	56°03'29.491"	133°01'41.066"	12.0
Shoal	6.6	56°07'51.652"	133°59'11.219"	12.1
Shoal	6.8	56°04'43.723"	133°54'54.427"	12.4
Shoal	6.8	56°03'13.704"	133°55'03.968"	12.5
Shoal	6.9	56°05'05.981"	133°55'02.068"	12.6
Shoal	6.9	56°06'25.719"	133°02'44.792"	12.6
Shoal	7.2	56°06'50.802"	133°59'19.036"	13.1
Shoal	7.2	56°03'49.334"	133°01'55.565"	13.2
Shoal	7.2	56°09'18.595"	133°08'58.158"	13.2
Shoal	7.4	56°06'29.911"	133°56'46.095"	13.6
Shoal	7.9	56°04'14.411"	133°56'40.152"	14.6
Shoal	8.1	56°06'18.764"	133°56'41.709"	15.0
Shoal	8.1	56°04'21.253"	133°54'27.152"	15.0
Shoal	8.2	56°04'34.902"	133°00'37.744"	15.1
Shoal	8.7	56°05'52.032"	133°57'09.466"	16.0

Shoal	8.8	56°05'44.502"	133°02'59.473"	16.2
Shoal	8.9	56°09'42.527"	133°06'10.011"	16.4
Shoal	9.1	56°05'21.097"	133°55'54.735"	16.6
Shoal	9.1	56°07'35.522"	133°58'33.368"	16.7
Shoal	9.2	56°08'23.283"	133°01'12.030"	16.8
Shoal	9.1	56°09'16.159"	133°05'31.125"	16.8
Shoal	9.2	56°09'49.117"	133°04'52.352"	16.9
Shoal	9.2	56°08'05.281"	133°59'43.641"	16.9
Shoal	9.3	56°06'58.071"	133°01'53.967"	17.1
Shoal	9.3	56°06'09.473"	133°02'30.731"	17.1
Shoal	9.9	56°03'37.157"	133°53'17.691"	18.2
Shoal	10.1	56°05'24.397"	133°56'57.341"	18.4
Shoal	10.1	56°07'26.877"	133°57'54.448"	18.5
Shoal	10.1	56°00'25.596"	133°04'58.815"	18.6
Shoal	10.7	56°05'41.535"	133°57'12.822"	19.6
Shoal	11.0	56°04'10.338"	133°54'07.142"	20.2

ADVANCE INFORMATION

This is advance information subject to office review. Questions concerning this letter should be directed to the Chief, Pacific Hydrographic Branch, (206) 526-6835. Refer to survey project OPR-O327-RA-00 and Danger to Navigation message RA-06-00. More information on current RAINIER survey projects may be obtained by e-mail; contact the Field Operations Officer at FOO.RAINIER@NOAA.GOV.

Sincerely,

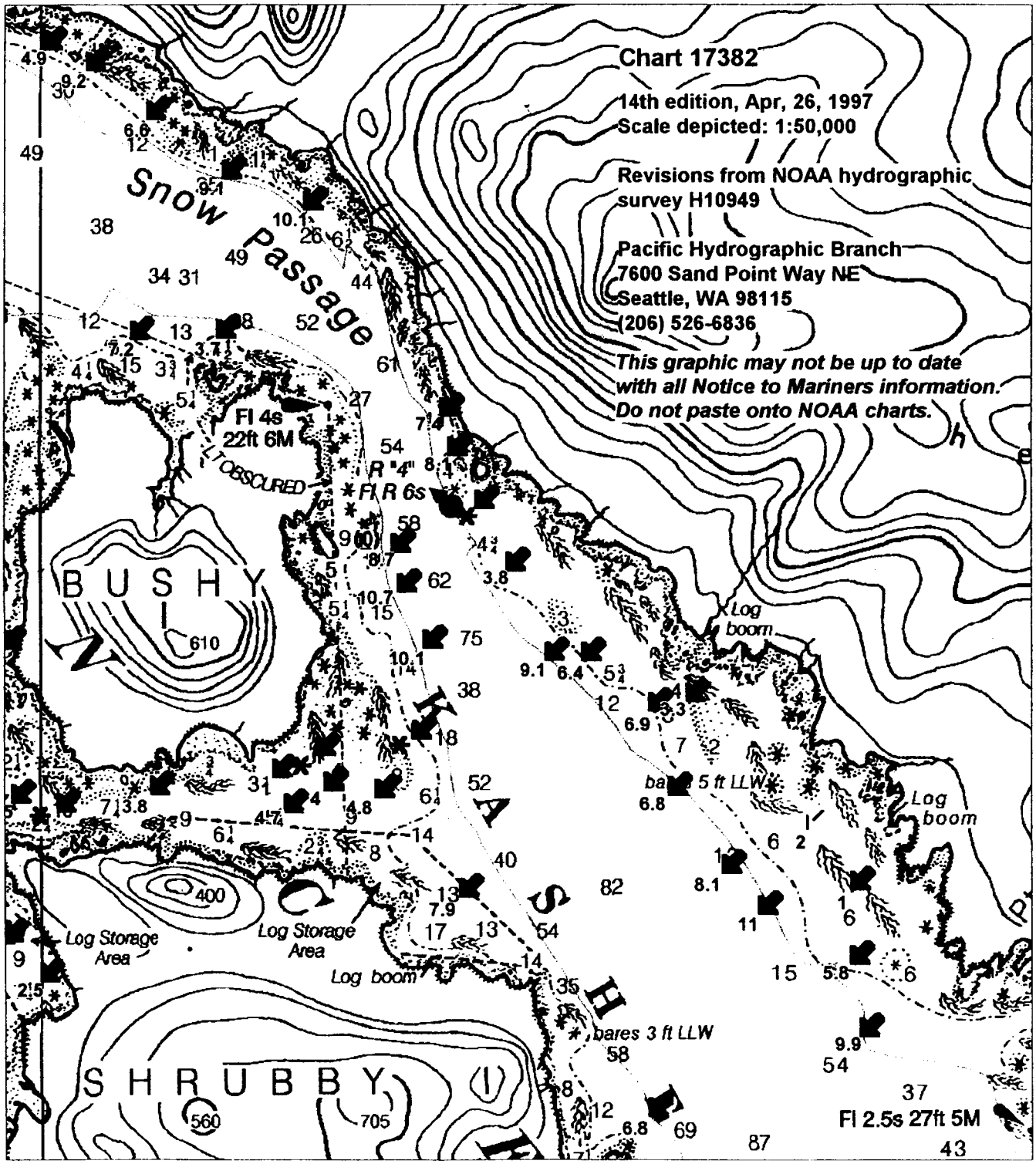
Daniel R. Herlihy

Daniel R. Herlihy
Commander, NOAA
Commanding Officer

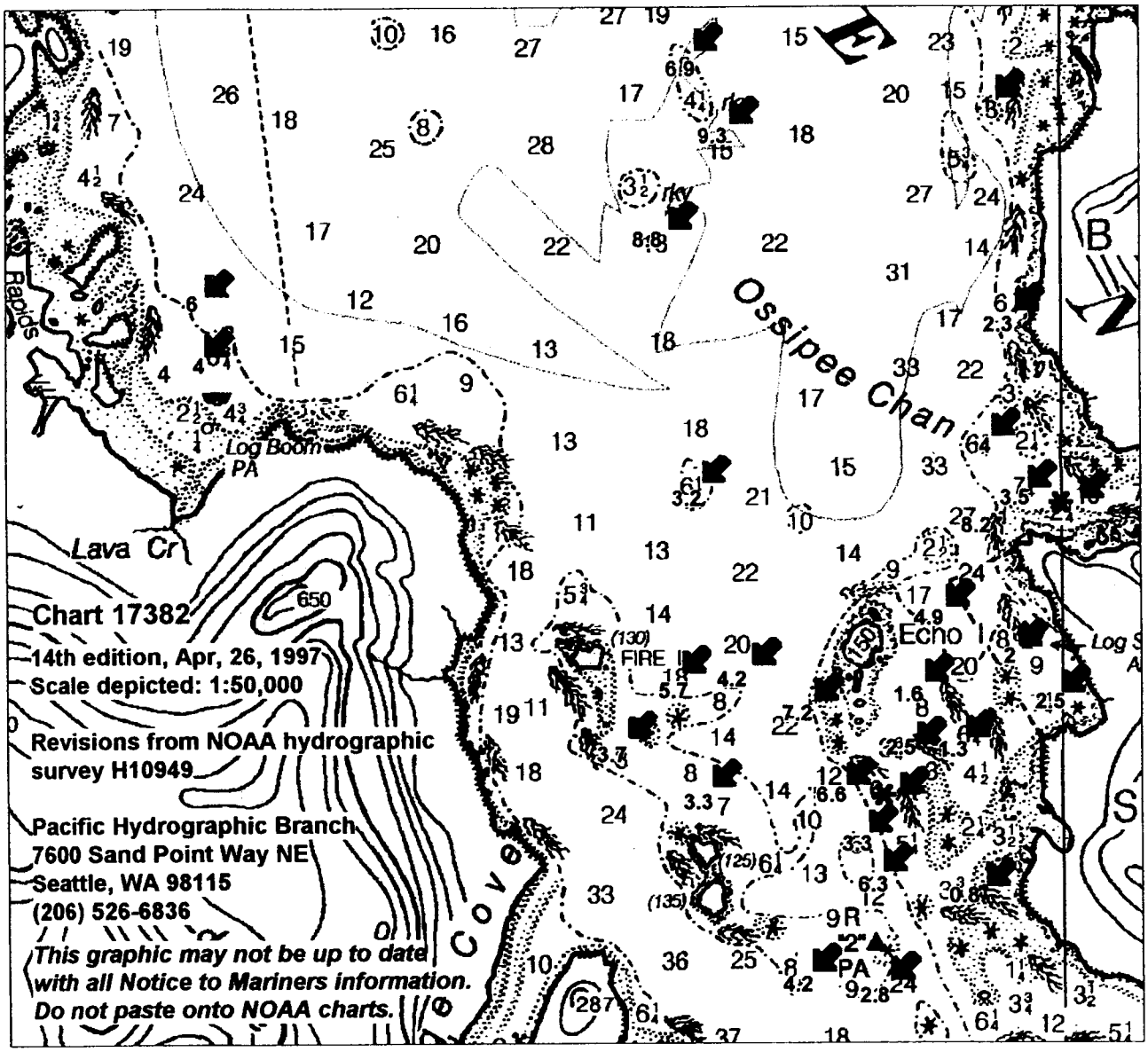
Attachment

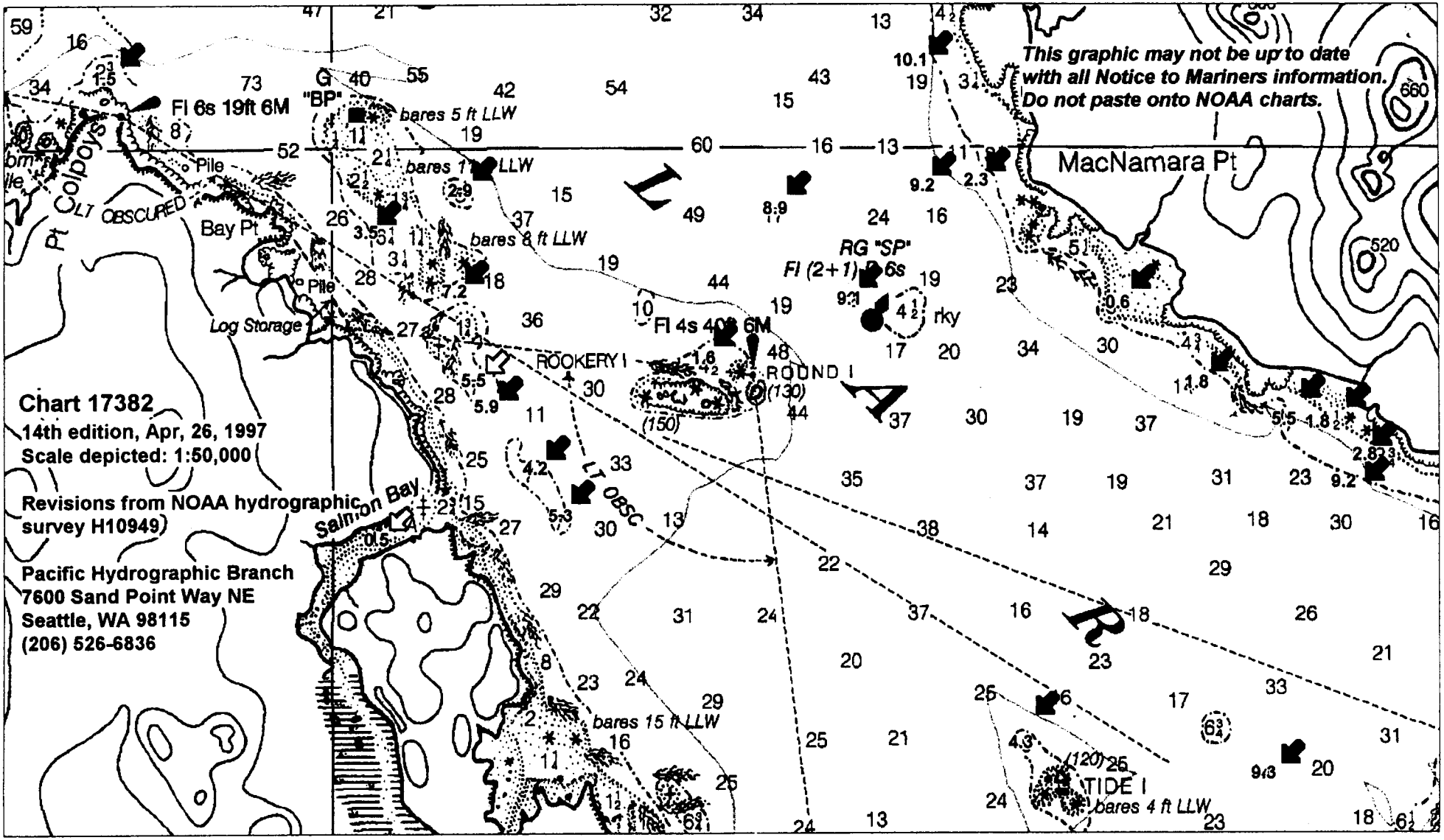
cc: NIMA
MOP
N/CS261
N/CS34

Note: Some of the reported DTONS were not compiled on the chart due to its close proximity to ledges, reefs, rocks or shallower soundings at the scale of the chart.



ADVANCE
INFORMATION


Ossipee Chan
Lava Cr
Log Boom
PA
Rapids
Echo
FIRE
Cove
Chart 17382
14th edition, Apr, 26, 1997
Scale depicted: 1:50,000
Revisions from NOAA hydrographic survey H10949
Pacific Hydrographic Branch
7600 Sand Point Way NE
Seattle, WA 98115
(206) 526-6836
This graphic may not be up to date with all Notice to Mariners information.
Do not paste onto NOAA charts.


Fl 6s 19ft 6M
"BP"
bares 5 ft LLW
bares 1 ft LLW
bares 8 ft LLW
Pile
Bay Pt
Pt Colpoys
LT OBSCURED
Log Storage
RG "SP"
Fl (2+1) R 6s
Fl 4s 40ft 6M
ROOKERY I
ROUND I
rky
LT OBSC
Salmon Bay
bares 15 ft LLW
TIDE I
bares 4 ft LLW
MacNamara Pt
This graphic may not be up to date with all Notice to Mariners information.
Do not paste onto NOAA charts.
Chart 17382
14th edition, Apr, 26, 1997
Scale depicted: 1:50,000
Revisions from NOAA hydrographic survey H10949)
Pacific Hydrographic Branch
7600 Sand Point Way NE
Seattle, WA 98115
(206) 526-6836

RECRD: 52519 | VESSLTERMS: OBSTRUCTION | CHART: 17382 | AREA: O

CARTOCODE: 0094 | SNDINGCODE: | DEPTH:

LAT83	56 20 08.96	LONG83	133 09 40.49	NATIVDATUM	31
LATDEC:	56.335822222222	LONDEC:	133.16124722222	GPQUALITY	High
				GPSOURCE	Scaled

PROJECT	OPR-O327	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	MCR	ASSIGNED	2/14/00

TECNIQ: MB,ES,DI

Techniqnote: VERIFY OR DISPROVE CHARTED ROCKS AND DETERMINE LEAST DEPTHS AND EXTENT OF ROCKY LEDGE BY INVESTIGATING AN AREA 300 METERS OUT FROM AN AXIS DRAWN FROM POS. 56-20-18 N 133-09-54W AND POS.56-19-18N 133-08-54 W

History:

HISTORY
H-3912/16--ROCK AWASH SHOWN, DESCRIPTIVE REPORT INDICATES THAT ROCK BARES 5 FT AT MLLW. CHARTED IN POS.56 20 08.96N, 133 09 40.49W. ANOTHER ROCK AT THE APPARENT SOUTHERN EXTREME ROCKY LEDGE CHARTED IN POS. 56 19 26.59N, 133 08 53.38W ROCK BARES 8 FT AT MLLW. ENTERED 2/00 MCR

Fieldnote:

INVESTIGATION

DATE(S): 3/30/2000 to 5/4/2000 (DN: 90-125)

VN: 2121, 2122, 2125, and 2126 TIME: N/A

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER) Shallow Water Multibeam, Visual Search and Vertical Beam Echosounder

OBSERVED POSITION: LAT. N/A LON. N/A

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY: Both charted rocks described in the history exist at the indicated positions. The rock located at position 56-20-10.1 N 133-09-41.32 W is a submerged rock with a least depth of 0.6 meters at MLLW. The rock located at position 56-19-28.26 N 133-08-52.83 W is a submerged rock with a least depth of 2.4 meters at MLLW. Both depths were reduced using unverified observed tides.

The extent of the rocky ledge was developed by various launches over time span of 35 days. Multibeam lauches developed the extent of the ledge while the single beam lauches developed the interior of the ledge. New features were located within the AWOIS region.

CHARTING RECOMMENDATION (HYDROGRAPHER): It is recommended that the positions of charted features, new features and soundings from survey H10949 supercede charted features and soundings.

EVALUATOR COMMENTS: Chart rocks and surrounding features in the vicinity of Bay Point Daybeacon "BP" based on the present survey

Proprietary

YEARSUNK: | NIMANUM:

Print Record

RECRD 52520 VESSLTERMS SOUNDING CHART 17382 AREA 0

CARTOCODE 0130 SNDINGCODE DEPTH

LAT83	56 19 46.02	LONG83	133 08 54.84	NATIVDATUM	3
LATDEC:	56.32945	LONDEC:	133.148566667	GPQUALITY	High
				GPSOURCE	Scaled

PROJECT OPR-0327 ITEMSTATUS Assigned SEARCHTYPE Full

RADIUS 100 INIT MCR ASSIGNED 02/14/2000

TECNIQ MB,ES

Technqnote DETERMINE THE EXTENT AND LEAST DEPTH(S) OF SHOAL AREA

Histor
HISTORY
H-3912/16- UNDEVELOPED 5 FM SHOAL SHOWN. ENTERED 2/00 MCR

Fieldnot
INVESTIGATION

DATE(S): 4/5/2000 to 4/18/2000 (DN: 96-109)

VN: 2121, 2126 TIME: N/A

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER) 100% Shallow Water Multibeam

OBSERVED POSITION: LAT. 56-19-48.04 N LON. 133-08-55.18 W

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY: A least depth of 2.9 fathoms (reduced using unverified observed tides) was located within the AWOIS region.

CHARTING RECOMMENDATION (HYDROGRAPHER): Supercede the current charted soundings with appropraite soundings from survey H10949.

EVALUATOR COMMENTS: AWOIS item addressed. Chart shoal area based on the present survey. MCR

Proprietar

YEARSUNK NIMANUM

Print

RECRD	52521	VESSLTERMS	OBSTRUCTION	CHART	17382	AREA	O
		CARTOCODE	0085	SNDINGCODE		DEPTH	

LAT83	56 19 17	LONG83	133 10 00	NATIVDATUM	31
LATDEC:	56.321388888889	LONDEC:	133.16666666667	GPQUALITY	Low
				GPSOURCE	Scaled

PROJECT	OPR-O327	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS		INIT	MCR	ASSIGNED	2/14/00
TECNIQ	VS,ES,SD				
Techniqnote	INVESTIGATE AN AREA FROM POS, 56-19-34 N 133-10-24 W TO 56-19-07N 133-09-50W TO THE SHORE TO DETERMINE THE STATUS OF CHARTED LOG STORAGE AREA AND MAKE CHARTING RECOMMENDATION.				

History

HISTORY
CL1573/69-- 1968 APPLICATION SUBMITTED TO THE COE FOR THE ESTABLISHMENT OF A LOG STORAGE AREA. APPLICATION INCLUDES A GRAPHIC DEPICTING A SOLID LINE EXTENDING SE FROM BAY POINT AS PRESENTLY CHARTED. IT IS NOT MENTIONED WHETHER OR NOT A BREAKWATER OR RETAINING STRUCTURE WAS TO BE CONSTRUCTED. ENTERED 2/00 MCR

Fieldnote

INVESTIGATION

DATE(S): 4/9/2000 to 4/10/2000 (DN: 100-101)

VN: 2121 TIME: N/A

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER) Visual Search

OBSERVED POSITION: LAT. N/A LON. N/A

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY: A visual search was conducted within the AWOIS region during shoreline verification and the log boom was not located.

CHARTING RECOMMENDATION (HYDROGRAPHER): Remove the log storage area from the chart.

EVALUATOR COMMENTS: Remove the charted log storage area and its charted limits from Chart 17382.

Proprietary

YEARSUNK | NIMANUM

Print Record

RECRD	52522	VESSLTERMS	SOUNDING	CHART	17382	AREA	O
		CARTOCODE	0130	SNDINGCODE		DEPTH	

LAT83	56 19 12	LONG83	133 05 00	NATIVDATUM	3
LATDEC:	56.32	LONDEC:	133.083333333	GPQUALITY	Med
				GPSOURCE	Scaled

PROJECT	OPR-O327	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	150	INIT	MCR	ASSIGNED	02/14/2000
TECNIQ	MB,ES,DI				
Techniqnote	VERIFY OR DISPROVE 4 1/2 FM SOUNDING. DETERMINE THE EXTENT AND LEAST DEPTH OF SHOAL AREA				

Histor

HISTORY
H-3912/16--4 1/2 FM UNVERIFIED SOUNDING FROM DRAG SHEETS SHOWN IN PENCIL. ENTERED 2/00 MCR

Fieldnot

INVESTIGATION

DATE(S): 4/24/2000 (DN: 115)

VN: 2121, 2126 TIME: 18:40:13

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER) 100% Shallow Water Multibeam

OBSERVED POSITION: LAT 56-19-10.42 N LON 133-04-59.75 W

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY: A 5.2-fathom shoal (reduced using unverified observed tides) was located by shallow water multibeam in the region of the AWOIS item.

CHARTING RECOMMENDATION (HYDROGRAPHER): Replace the 4 1/2-fathom sounding with an appropriate sounding from survey H10949.

EVALUATOR COMMENTS: Chart the area based on the present survey.

Proprietar

YEARSUNK NIMANUM

Print

RECRD	52523	VESSLTERMS	UNKNOWN	CHART	17382	AREA	O
		CARTOCODE	0067	SNDINGCODE		DEPTH	

LAT83	56 18 16.7	LONG83	133 09 12.20	NATIVDATUM	06
LATDEC:	56.304638888889	LONDEC:	133.15338888889	GPQUALITY	Low
				GPSOURCE	Direct

PROJECT	OPR-O327	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	MCR	ASSIGNED	2/14/00
TECNIQ	MB,S2,ES,DI,SD				

Techniqnote

History

HISTORY
LNM33/85--17TH CGD: WRECK REPORTED TO BE SUBMERGED AT HIGH TIDE IN THE CENTER OF THE ENTRANCE TO SALMON BAY IN APPROX POS LAT.56-18.3, LONG.133-09.1 (NAD 27). ENTERED 2/00 MCR

Fieldnote

INVESTIGATION

DATE(S): 4/12/2000 (DN: 103)

VN: 2122 TIME: 18:30:00

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER) Visual Search and Dive Investigation.

OBSERVED POSITION: LAT. 56-18-16.7 N LON. 133-09-12.2 W

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY: Divers searched in the AWOIS region, and a short distance outside, and failed to locate any traces of a wreck. The region was searched visually for 20 minutes with 5 meters of visibility. VBES hydro was also run within the search radius, although no specific ES search was conducted. The wreck was searched for visually, during shoreline verification, and not observed. Depths in the vicinity of the charted wreck are 3 to 5 meters.

CHARTING RECOMMENDATION (HYDROGRAPHER): Remove the wreck symbol from all charts

EVALUATOR COMMENTS: Concur.

Proprietary

YEARSUNK | NIMANUM

Print Record

RECRD 52524 VESSLTERMS SOUNDING CHART 17382 AREA 0

CARTOCODE 0130 SNDINGCODE DEPTH

LAT83	56 17 11	LONG83	133 02 19.3	NATIVDATUM	3
LATDEC:	56.2863888889	LONDEC:	133.038694444	GPQUALITY	Med
				GPSOURCE	Direct

PROJECT	OPR-0327	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	200	INIT	MCR	ASSIGNED	02/14/2000

TECNIQ MB,ES,DI

Technqnote VERIFY OR DISPROVE 6 3/4 FM SOUNDING. DETERMINE THE EXTENT AND LEAST DEPTH OF SHOAL AREA

Histor
HISTORY
H-3912/16-- 6 3/4 FM UNVERIFIED SOUNDING FROM DRAG SHEETS SHOWN IN PENCIL ENTERED 2/00 MCR

Fieldnot
INVESTIGATION

DATE(S): 4/13/2000 (DN: 104)

VN: 2121, 2126 TIME: 18:05:59

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER) 100% Shallow Water Multibeam

OBSERVED POSITION: LAT 56-17-10.24 N LON 133-02-18.65 W

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY: A 6.6-fathom shoal (reduced using unverified observed tides) was located within the AWOIS region in the vicinity of the charted 6 3/4-fathom sounding.

CHARTING RECOMMENDATION (HYDROGRAPHER): Replace the 6 3/4-fathom sounding with an appropriate sounding from survey H10949.

EVALUATOR COMMENTS: Chart the 6½ fathoms shoal sounding based on the present survey.

Proprietar

YEARSUNK NIMANUM

Print

RECRD 52525 VESSLTERMS OBSTRUCTION CHART 17382 AREA 0

CARTOCODE 0067 SNDINGCODE DEPTH

LAT83	56 16 17.5	LONG83	133 02 36.8	NATIVDATUM	3
LATDEC:	56.2715277778	LONDEC:	133.043555556	GPQUALITY	Med
				GPSOURCE	Scaled

PROJECT OPR-0327 ITEMSTATUS Assigned SEARCHTYPE Full

RADIUS INIT MCR ASSIGNED 02/14/2000

TECNIQ MB,ES,DI

Techniqnote CONDUCT A SEARCH 200M OUT FROM AN AXIS DRAWN FROM POS. 56-16-11.1 N 133-02-32.8 W TO 56-16-33.1 N 133-02-47.5 W

Histor HISTORY
H-3912/16-- 4 1/2 FM IN POS. 56-16-18N 133-02-37.5W (NAD 83) ALONG WITH 6 FM (CHARTED IN ERROR AS 8 FM) IN POS. 56-16-26.3N 133-02-42.3W SHOWN IN PENCIL. BOTH DEPTHS ARE UNVERIFIED SOUNDINGS FROM DRAG SHEETS. ENTERED 2/00 MCR

Fieldnot INVESTIGATION

DATE(S): 3/25/2000 (DN: 85)

VN: 2121, 2126 TIME: 20:44:02 (6.9 fathoms), 20:07:19 (4.1 fathoms)

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER) 100% Shallow Water Multibeam

OBSERVED POSITION: LAT. 56-16-25.72 N LON. 133-02-44.79 W (6.9 fathoms)
LAT. 56-16-17.17 N LON. 133-02-43.76 W (4.1 fathoms)

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY: A 6.9-fathom shoal was located within the AWOIS region in the vicinity of the charted 8-fathom sounding. A 4.1-fathom shoal was located within the AWOIS region in the vicinity of the charted 4 1/4-fathom sounding. Both soundings were reduced using unverified observed tides.

CHARTING RECOMMENDATION (HYDROGRAPHER): Replace the charted soundings with appropriate soundings from survey H10949.

EVALUATOR COMMENTS: Chart the 6 3/4 and 4 1/4 fathoms shoal soundings based on the present survey. — MCR

Proprietar

YEARSUNK NIMANUM

Print

RECRD 52526 VESSLTERMS SOUNDING CHART 17382 AREA 0

CARTOCODE 0130 SNDINGCODE DEPTH

LAT83	56 15 57.1	LONG83	133 03 03.1	NATIVDATUM	3
LATDEC:	56.2658611111	LONDEC:	133.050861111	GPQUALITY	Med
				GPSOURCE	Scaled

PROJECT OPR-0327 ITEMSTATUS Assigned SEARCHTYPE Full

RADIUS 200 INIT MCR ASSIGNED 02/14/2000

TECNIQ MB,ES,DI

Techniqnote

Histor

HISTORY
H-3912/16-- 3 1/2 FM UNVERIFIED SOUNDING FROM DRAG SHEETS SHOWN IN PENCIL ENTERED 2/00 MCR

Fieldnot

INVESTIGATION

DATE(S): 4/6/2000 (DN: 97)

VN: 2121, 2126 TIME: 20:48:09

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER) 100% Shallow Water Multibeam

OBSERVED POSITION: LAT. 56-15-54.81 N LON. 133-03-06.72 W

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY: A 3-fathom shoal was located within the AWOIS region in the vicinity of the charted 3 1/2-fathom sounding.

CHARTING RECOMMENDATION (HYDROGRAPHER): Replace the 3 1/2-fathom charted sounding with an appropriate sounding from survey H10949.

EVALUATOR COMMENTS: Chart the 3.0 and 2.9 fathoms shoal soundings found in the vicinity of the charted AWOIS item.

Proprietar

YEARSUNK NIMANUM

Print

RECRD 52527 VESSLTERMS OBSTRUCTION CHART 17382 AREA 0

CARTOCODE 0067 SNDINGCODE DEPTH

LAT83	56 15 05.2	LONG83	133 06 06	NATIVDATUM	3
LATDEC:	56.2514444444	LONDEC:	133.101666667	GPQUALITY	Low
				GPSOURCE	Direct

PROJECT	OPR-0327	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	200	INIT	MCR	ASSIGNED	02/14/2000

TECNIQ VS,MB,ES,SD

Techniqnote

Histor

HISTORY
CL1200/75--COE, ESTABLISH A MOORING BUOY IN 56-15-08, 133-06-00 NAD 27

Fieldnot

INVESTIGATION

DATE(S): 04/10/2000 (DN: 101)

VN: 2125 TIME: 20:30:29

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER) Visual Search

OBSERVED POSITION: LAT. LON.

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY: A 10-minute visual search was conducted within the region of the AWOIS item and the mooring buoy was not located. The region was visited on numerous other instances during mainscheme hydrography

CHARTING RECOMMENDATION (HYDROGRAPHER): Remove the mooring buoy symbol from all charts.

EVALUATOR COMMENTS: Concur. Remove the mooring buoy from the chart of the area.

Proprietar

YEARSUNK NIMANUM

Print

RECRD: 52528 | VESSLTERMS: OBSTRUCTION | CHART: 17382 | AREA: 0
CARTOCODE: 0085 | SNDINGCODE: | DEPTH:

LAT83	56 14 59.93	LONG83	133 05 59.99	NATIVDATUM	3
LATDEC:	56.2499805556	LONDEC:	133.099997222	GPQUALITY	Low
				GPSOURCE	Direct

PROJECT	OPR-0327	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	200	INIT	MCR	ASSIGNED	02/14/2000
TECNIQ	VS,MB,ES,SD				

Techniqnote

Histor

HISTORY
LNM41/95--17TH CGD; 9/19/95; ADD LOG BOOM IN APPROX. POS. 56 15 01.2N, 133 05 53.8 (NAD 27)
**** NOTE: CONFLICT BETWEEN SOURCE GP AND CHARTED GP (150M TO W/SW) EXIST

Fieldnot

INVESTIGATION

DATE(S): 04/10/2000 (DN: 101)

VN: 2125 TIME: 20:17:03

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER) Visual Search

OBSERVED POSITION: LAT 56° 14' 56.848" N LON. 133° 5' 56.363" W

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY: A visual search was conducted within the AWOIS region and the log boom was not located

CHARTING RECOMMENDATION (HYDROGRAPHER): Remove Log boom from all charts.

EVALUATOR COMMENTS: Concur. Remove the log boom from the chart of the area.

Proprietar

YEARSUNK | NIMANUM

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RECRD 52529 VESSLTERMS OBSTRUCTION CHART 17382 AREA 0

CARTOCODE 0085 SNDINGCODE DEPTH

LAT83	56 14 30	LONG83	132 58 24	NATIVDATUM	3
LATDEC:	56.2416666667	LONDEC:	132.973333333	GPQUALITY	Low
				GPSOURCE	Scaled

PROJECT	OPR-0327	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS		INIT	MCR	ASSIGNED	02/14/2000

TECNIQ VS,ES,MB,SD

Techniqnote INVESTIGATE TWO CHARTED LOG STORAGE AREAS AND BOOMS DESCRIBED IN HISTORY FOR CHARTING RECOMMENDATION. VERIFY OR DISPROVE LOG BOOM CHARTED IN APPROX. POS. 56-14-01N 132-56-44 W (100 METER RADIUS)

Histor

HISTORY
CL1200/75--COE, PERMIT APPLICATION AND FOLLOW UP, 1972-1973; PLANS FOR LOG HANDLING FACILITY SUBMITTED TO THE COE BY THE KETCHIKAN PULP CO. SHOWS TWO OUTLINED AREAS OF SHUBBY ISLAND CONTAINING LOG BOOMS. AREA ON NORTHERN SIDE OF THE ISLAND INCLUDES A STANDING BOOM IN APPROX. POS. 56-14-27.7 N 132-58-17.2 W AND A LOG BOOM SHOWN FROM APPROX. POS. 56-14-02N 132-56-59.6 W TO 56-13-58.4N 132-55-59.6 W NAD 83. WESTERN SIDE OF ISLAND SHOWS A LOG BOOM FROM APPROX. POS. 56-14-10.36N 133-00-04.54 W TO 56-13-51N 132-59-46W NAD 83. FOLLOW UP NOTICE FROM THE COE INDICATES THAT WORK WAS COMPLETED 4/1/73. ENTERED 2/00 MCR

56-14-01.02 N 132-56-44.11 W LOG BOOM

Fieldnot

INVESTIGATION

DATE(S): 4/6/2000, 4/8/2000 (DN: 97, 99)

VN: 2122 TIME: N/A

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER) Visual Search

OBSERVED POSITION: LAT. N/A LON. N/A

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY: During shoreline verification on DN 97 and DN 99 the two AWOIS regions were searched visually for evidence and/or remnants of log booms. No indications of log booms were found

CHARTING RECOMMENDATION (HYDROGRAPHER): Remove the log booms from the chart.

EVALUATOR COMMENTS: Concur. Remove the log booms from the chart of the area.

Proprietar

YEARSUNK NIMANUM

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-10949

Name on Survey	A ON CHART NO. 17382	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
ALASKA (title)	X		X							1
BAY POINT	X		X							2
BUSHY ISLAND	X		X							3
CLARENCE STRAIT	X		X							4
COLPOYS, POINT	X		X							5
ECHO ISLAND	X		X							6
EXCHANGE ISLAND	X		X							7
FIRE ISLAND	X		X							8
KASHEVAROF PASSAGE	X		X							9
MACNAMARA POINT	X		X							10
NESBITT, POINT	X		X							11
NESBITT REEF	X		X							12
OSSIPEE CHANNEL	X		X							13
PRINCE OF WALES ISLAND	X		X							14
ROOKERY ISLAND	X		X							15
ROUND ISLAND	X		X							16
SALMON BAY	X		X							17
SHRUBBY ISLAND	X		X							18
SNOW PASSAGE	X		X							19
TIDE ISLAND	X		X							20
ZAREMBO ISLAND	X		X		Approved					21
					Dennis J. Kinsella					22
					Chief Cartographer					23
							NOV 15 2000			24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: August 9, 2000

HYDROGRAPHIC BRANCH: Pacific
HYDROGRAPHIC PROJECT: OPR-O327-RA-2000
HYDROGRAPHIC SHEET: H-10949

LOCALITY: Northern Clarence Strait, AK
TIME PERIOD: March 22 - May 8, 2000

TIDE STATION USED: 945-1074 Bushy Island, AK
Lat. 56° 16.6'N Lon. 132° 59.1'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 4.219 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: SA95, SA97, SA98, SA99, SA100, SA101, SA102, SA103, SA104 & SA139.

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.

For ----------
CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

NOAA FORM 77-27(H) (9-83)

U.S. DEPARTMENT OF COMMERCE

HYDROGRAPHIC SURVEY STATISTICS

REGISTRY NUMBER: H-10949

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	NA
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	NA

DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS	
ACCORDION FILES	2					
ENVELOPES						
VOLUMES						
CAHIERS						
BOXES						

SHORELINE DATA

SHORELINE MAPS (List): GC-10843a & GC-10843b

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List):

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	*EVALUATION*	*TOTALS*
POSITIONS ON SHEET			
POSITIONS REVISED			
SOUNDINGS REVISED			
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS			
VERIFICATION OF SOUNDINGS			
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET			375
COMPARISON WITH PRIOR SURVEYS AND CHARTS			
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT			52
GEOGRAPHIC NAMES			
OTHER: (Chart Compilation)			89
USE OTHER SIDE OF FORM FOR REMARKS TOTALS			516

Pre-processing Examination by	*Beginning Date*	*Ending Date*
Verification of Field Data by E. Domingo, R. Davies, R. Mayor, G. Nelson, I. Almacen	*Time (Hours)* 375	*Ending Date*
Verification Check by	*Time (Hours)*	*Ending Date*
Evaluation and Analysis by I. Almacen	*Time (Hours)* 52	*Ending Date* 05/16/2001
Inspection by L. Deodato	*Time (Hours)* 10	*Ending Date* 06/28/2001

* U.S. GOVT. PRINTING OFFICE 1983: 764-006/6061

EVALUATION REPORT
H-10949

A. PROJECT
Project information is adequately discussed in the hydrographer's report.

B. AREA SURVEYED
The survey area is adequately described in the hydrographer's report. A page-size plot of the area on chart 17382 depicting the specific limits of supersession accompanies this report as Attachment 1.

The bottom consists mainly of mud, sand and pebbles mixed with broken shells. Depths range from 0.0 to 101.0 fathoms.

C. SURVEY VESSELS
Survey vessels are adequately discussed in the hydrographer's report.

D. AUTOMATED DATA ACQUISITION AND PROCESSING
The acquisition and processing of data in the field has been adequately discussed in the hydrographer's report and in the Data Acquisition and Processing Report submitted by the ship under separate cover.

Office processing of survey data was conducted using the same Computer Aided Resource Information System (CARIS), and Hydrographic Processing System (HPS) used by the hydrographer. The smooth sheet was compiled with MicroStation 95.

Digital data for this survey exists in the standard HPS format, a database format using the .dbf extension. In addition, the smooth sheet drawing is filed in the MicroStation format, i.e., dgn extension. Copies of these files have been forwarded to the Hydrographic Surveys Division and a backup copy retained at PHB. Database records forwarded are in the Internal Data Format (IDF) and are in compliance with specifications in existence at the time of survey processing.

The drawing files necessarily contain information that is not part of the HPS data set such as geographic names text, line-type data, and minor symbolization. In addition, those soundings deleted from the drawing for clarity purposes remain unrevised in the HPS digital files to preserve the integrity of the original hydrographic data set. Cartographic codes used to describe the digital data are those authorized by the Specifications and Deliverables, April 2000.

The data are plotted using a Universal Transverse Mercator, Zone 08 projection and are depicted on a single sheet.

E. SONAR EQUIPMENT
Side scan sonar was not utilized during this survey.

F. SOUNDING EQUIPMENT
Sounding equipment has been adequately discussed in section B1 of the hydrographer's report. Vertical-beam echo sounder data were collected in near shore and shallow areas which were too shallow for the safe and effective use of vessels equipped with shallow water multibeam system

G. CORRECTIONS TO SOUNDINGS
Soundings and elevations of features have been reduced to Mean Lower Low Water (MLLW) or Mean High Water (MHW), with approved tide correctors obtained from the Center For Operational Oceanographic Products and Services. The approved tide correctors are zoned from Bushy Island, Alaska, gage 945-1074.

Other sounding reducers include corrections for static draft, dynamic draft, sound velocity, heave, roll and pitch. These reducers have been reviewed and are consistent with NOS specification.

H. CONTROL STATIONS

Section C of the hydrographer's report contains information concerning horizontal and vertical control used during this survey. A horizontal and vertical control report for OPR-O327 was submitted under separate cover and was included in the project file.

The positions of horizontal control stations used during hydrographic operations are published values based on NAD 83. The geographic positions of all survey data are based on NAD 83. The smooth sheet is annotated with an NAD27 adjustment tick based on values determined with the NGS program NADCON. Geographic positions based on NAD27 may be plotted on the smooth sheet utilizing the NAD 83 projection by applying the following corrections.

Latitude: -1.285 seconds (-39.760 meters)
Longitude: 6.211 seconds (106.884 meters)

The geographic positions of the prior surveys covering the area of the present survey are based on SE Alaska Datum. Geographic positions based on SE Alaska Datum may be plotted on the smooth sheet utilizing the NAD 83 projection by applying the following corrections.

Latitude: 4.150 seconds (128.359 meters)
Longitude: 0.810 second (13.936 meters)

I. HYDROGRAPHIC POSITION CONTROL

Differential GPS (DGPS) was used to control this survey. The satellite configuration, as indicated by HDOP and number of satellites, is monitored visually on the IDSSS and Trimble displays to insure position data quality. The maximum (HDOP) allowable limit of 7.50 for a 1:20,000 scale survey has not been exceeded during this survey and the quality of data obtained is good. DGPS performance checks were conducted in the field and found adequate.

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

Additional information concerning specific control system type, calibrations and system checks can be found in the hydrographer's report and in the separates related to horizontal position control and correction to position data.

J. SHORELINE

Shoreline originates with multiple sources from Remote Sensing Division, NGS. A series of T and TP-Sheets T-13376, T-13377, T-13378, TP-00564, TP-00565, TP-00566, TP-00571, TP-00572 and TP-00573 was provided to the hydrographer and was field verified. The results of that verification are depicted on the preliminary smooth sheet and are contained in the field records. Subsequently, RSD issued new shoreline information in the form of geographic cells. GC10483 covers the area of the present survey, however, it was not field verified. Comparison to the prior shoreline maps indicates significant differences in the near-shore depiction of features. Consequently, GC10483 was used to supplement the topographic information provided via the T and TP maps.

The shoreline maps and the newly located features portrayed on the smooth sheet should supersede the presently charted information covered by the present survey.

K. CROSSLINES

Crosslines are adequately discussed in section B2 of the hydrographer's report.

L. JUNCTIONS

Survey H-10949 junctions with the following survey.

Survey	Year	Scale	Area
H-10950	2000	1:20,000	Southern Limit

The junction with survey H-10950 is complete and "Joins" notes have been added to the smooth sheet where applicable. A few soundings and feature from the junction survey have been transferred to the present survey to delineate the bottom configuration within their common areas.

M. COMPARISON WITH PRIOR SURVEYS

Chart	Year	Scale	Datum
H-3794 WD	1915-16	1:20,000	SE Alaska
H-3912	1916	1:20,000	SE Alaska
H-3925 WD	1916	1:20,000	SE Alaska

The legibility of the prior survey digital image files is considered acceptable and each prior smooth sheet was adequately registered to the present survey smooth sheet. The registration was accomplished by matching common identifiable geographic points between the present survey and the prior survey smooth sheets.

Prior survey H-3912 covers the area of the present survey. The soundings from the current survey are generally shallower by about 1 to 5 fathoms with the exception of those mentioned in section D2 of the hydrographer's report where the survey depths appears to be deeper by about the same amount than the prior. No significant discrepancies were noted during survey comparison. The depth differences may be attributed to improved positioning and sounding methods employed during this recent survey.

Prior wire drag surveys H-3794 and H-3925 cover the main approaches to and including the narrow navigable area along Snow Passage. There were no conflict found between the present survey depths and the effective wire sweep depths of these prior surveys. An adequate multibeam coverage of the area was accomplished during this survey to substantiate the supersession of the prior wire drag information within the common area and the removal of the wire drag green tint depicted on chart 17382.

A more thorough coverage of the area utilizing the shallow water multibeam (SWMB) system supplemented by single beam echo sounding system was accomplished during this survey. This recent survey has provided a better portrayal of the rough configuration of the bottom particularly along the narrow corridors of Snow Passage. Vertical-beam echo sounding system were used along the near shore and shallow areas which were deemed too shallow for the safe navigation and effective used of vessels equipped with shallow-water multibeam system.

Survey H-10949 is adequate to supersede the prior surveys within the area of common coverage.

N. ITEM INVESTIGATIONS

Eleven (11) AWOIS items were investigated during this survey. The disposition of these features are adequately addressed and entered in the AWOIS Database Forms included in the hydrographer's report.

O. COMPARISON WITH CHART

Survey H-10949 was compared with the following charts.

Chart	Edition	Date	Scale	Datum
17382	14th	April 26,1997	1:80,000	NAD 83
17383	1st	------	1:30,000	NAD 83

a. Hydrography

Charted hydrography on chart 17382 originates with the previously discussed prior surveys and requires no further discussion.

The application of this survey to charts of a scale less than 1:40,000 may require the generalization of features such as ledges, and reefs. The recommended charting disposition of specific ledges or reefs is their depiction as isolated rocks. The application of this survey to charts of a scale greater than 1:40,000 may be accomplished without generalization of features. Features from survey H-10949 have been generalize on chart 17382 along the high water line where applicable and a very few features were generalized on chart 17383.

Charted shoreline changes were noted during this survey. A few charted rocks were identified in the field as part of the reefs and some are high point or extension of the newly located ledges.

The mooring buoy shown on chart 17382 at latitude 56/15/05N, longitude 133/05/06W, was not depicted on chart 17360. This feature was investigated as AWOIS item 52527 and was not found during this survey. It is recommended that this charted feature be removed on the next edition of chart 17382.

The log booms and log storage areas charted along the shore of Shrubby Island and in the vicinity of Point.Nesbitt were not found during this recent survey. It is therefore recommended that these charted features be deleted on the next edition of chart 17382.

The hydrography compiled on the first edition of chart 17383 at the scale of 1:30,000 originates with the present survey. This chart is not yet published and since the source of charting is the present survey, there is nothing to compare to at this time.

Survey H-10949 is adequate to supersede charted hydrography within the common area.

b. Dangers to navigation

Eighty-nine (89) dangers to navigation (DTON) were listed on the hydrographer's report for this survey. A danger to navigation report was transmitted to PHB with the hydrographer's report on September 1,2000. No additional dangers were identified during office processing. Copy of report is attached.

P. ADEQUACY OF SURVEY

The hydrography contained on survey H-10949 is adequate to:

a. delineate the bottom configuration, determine least depths, and draw the required depth curves;
b. reveal there are no significant discrepancies or anomalies requiring further investigation; and
c. show the survey was properly controlled and soundings are correctly plotted.

The hydrographic records and reports received for processing are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change No. 3, the Hydrographic Survey Guidelines, the Field Procedures Manual, April 1998 Edition, and the Specifications and Deliverables 2000.

Q. AIDS TO NAVIGATION

There are five (5) fixed and two (2) floating aids to navigation located within the survey area. Point Colpoys Light was neither verified nor mentioned in the hydrographer's report and was depicted on the smooth sheet as compiled on geographic cell GC10483. The charted Kashevarof Passage Daybeacon 2 (PA) was positioned during this survey and found to be properly charted. All these aids with the exception of Point Colpoys Light were found in good condition and adequately serve their intended purpose.

It was noted during office processing that Rookery Island Light is presently charted off the northern tip of Round Island instead of Rookery Island. It is recommended that the name of the light be changed to Round Island Light to match the name of the island where the light is presently located.

No features of landmark value was reported by the hydrographer during this survey, however, a tower was compiled on the geographic cell GC10483 located on the northern section of Shrubby Island at latitude 56/14/10.5N, longitude 132/58/51.7W and recommended to be charted as a landmark.

R. STATISTICS

Statistics are adequately itemized in the hydrographer's report.

S. MISCELLANEOUS

Miscellaneous information is adequately discussed in the hydrographer's report.

T. RECOMMENDATIONS

Survey H-10949 is a good hydrographic survey. No additional work is recommended.

U. REFERRAL TO REPORTS

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

for Isagani A. Almacen
Cartographer

APPROVAL SHEET
H-10949

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, cartographic symbolization, comparison with prior surveys and verification or disproval of charted data. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Dennis Hill Date: 12-5-01

Dennis Hill,
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 Evaluation Report.

J E Lowell Jr. Date: 1/30/02

John E. Lowell, Jr.
Commander, NOAA
Chief, Pacific Hydrographic Branch

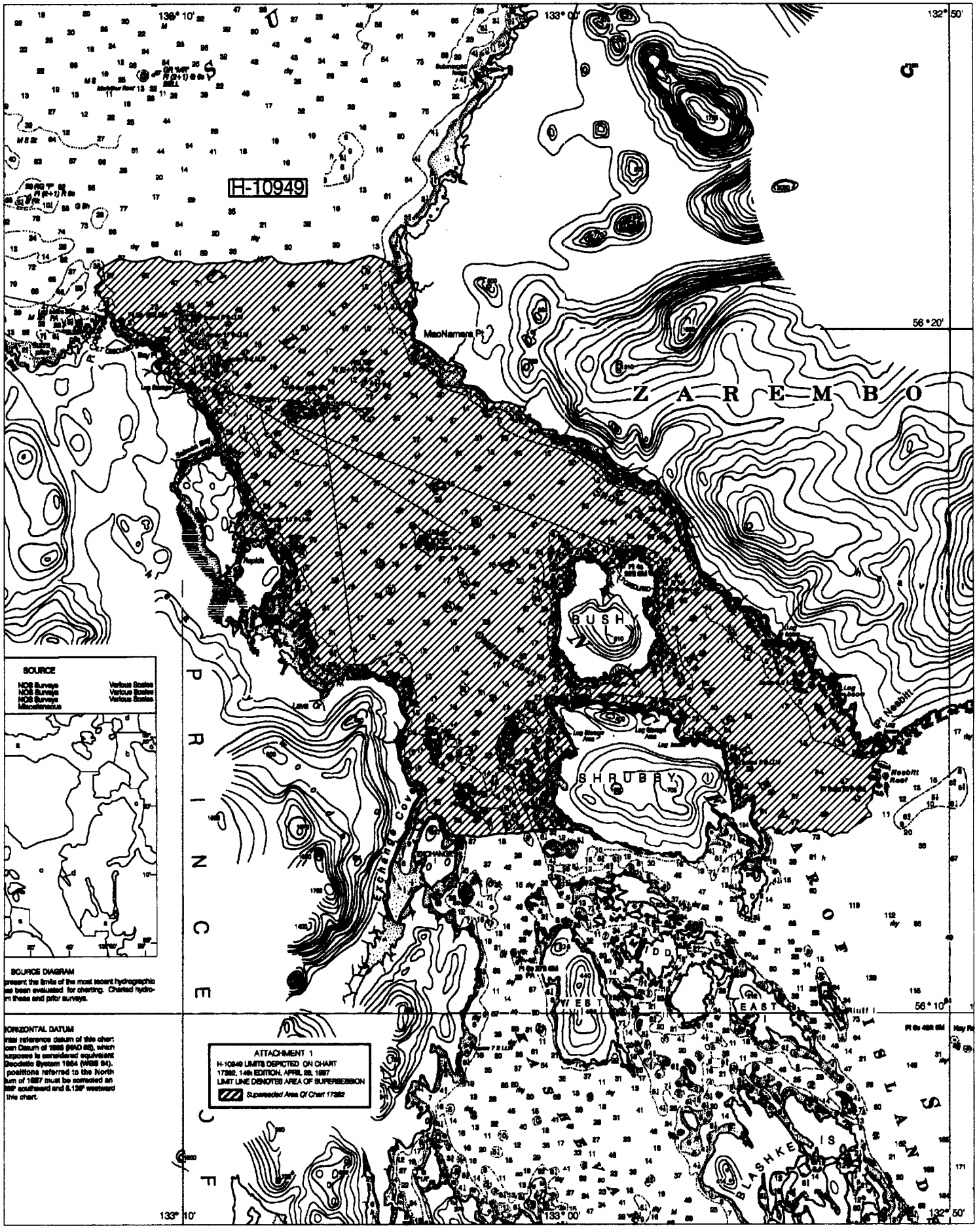
****

Final Approval

Approved:

Samuel P. DeBow, Jr. Date: March 1, 2002

Samuel De Bow, Jr.
Captain, NOAA
Chief, Hydrographic Surveys Division


H-10949
133° 10'
133° 00'
132° 50'
56° 20'
56° 10'
MacNamara Pt
Z A R E M B O
BUSH I
SHRUBBY I
Exchange Cove
Ft Nesbitt
Nesbitt Reef
P R I N C E
W E S T
E A S T
A P O L L O
I S L A N D S
BLASHKE IS
SOURCE
NOS Surveys
NOS Surveys
NOS Surveys
Miscellaneous
Various Scales
Various Scales
Various Scales
SOURCE DIAGRAM
present the limits of the most recent hydrographic
as been evaluated for charting. Charted hydro-
m these and prior surveys.
ORIZONTAL DATUM
rizontal reference datum of this chart
orth Datum of 1983 (NAD 83), which
purposes is considered equivalent
Geodetic System 1984 (WGS 84).
positions referred to the North
tum of 1927 must be corrected an
.69" southward and 6.136" westward
this chart.
ATTACHMENT 1
H-10949 LIMITS DEPICTED ON CHART
17362, 14th EDITION, APRIL 28, 1997
LIMIT LINE DENOTES AREA OF SUPERSESSION
Superseded Area Of Chart 17362

NOAA FORM 75-96
(10-83)

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

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10943

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
17382	4/19/01		Full ~~Part~~ ~~Before~~ After Marine Center Approval Signed Via Full application of
			Drawing No. soundings & features from smooth sheet thru
			chart 17383.
17383	7/24/01		Full ~~Part~~ ~~Before~~ After Marine Center Approval Signed Via Full application of
			Drawing No. sndgs. & features from smooth sheet.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
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SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.