H11448

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-10-06-05

Registry No. H11448

LOCALITY

State Alaska

General Locality Wrangell Narrows

Sublocality Point Humbug to 1.3 NM North of Green Point

2005

CHIEF OF PARTY

CDR John W. Humphrey, NOAA

LIBRARY & ARCHIVES

DATE

NOAA FORM 77-28 (11-72)

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

REGISTRY No

H11448

HYDROGRAPHIC TITLE SHEET

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-10-06-05

State: **Alaska**

General Locality: **Wrangell Narrows**

Sub-Locality: **Point Humbug to 1.3 NM North of Green Point**

Scale: **1:10,000** Dates of Survey: **4/22/05 - 5/20/05, and 5/17/06 - 5/23/06**

Instructions dated: **3/24/2005** Project No.: **OPR-O325-RA-05**

Vessel: **RA5 (1006), RA6 (1015), RA4 (1016), RA3 (1021), RA2 (1103), RA7 (817)**

Chiefs of party: **CDR John W. Humphrey, NOAA (2005), and CDR Guy T. Noll, NOAA (2006)**

Surveyed by: **RAINIER Personnel**

Soundings by echo sounder, hand lead, pole: **Reson 8101, Seabeam/Elac 1180, Reson 8125, Knudsen 320M**

Graphic record scaled by: **N/A**

Graphic record checked by: **N/A** Automated Plot: **N/A**

Verification by: **Laura Pagano, Peter Holmberg**

Soundings in: **Fathoms and Feet at MLLW**

REMARKS: **All times are UTC. UTM Projection (zone #8).**

Revisions and annotations appearing as endnotes were generated during office processing. As a result, page numbering may be interrupted or non-sequential.

All separates are filed with the hydrographic data.

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537

Descriptive Report to Accompany Hydrographic Survey H11448

Project OPR-O325-RA-05
Wrangell Narrows, AK
Point Humbug to 1.3 NM North of Green Point
Scale 1:10,000
April-May 2005, May 2006
NOAA Ship RAINIER (S221)
Chiefs of Party: Commander John W. Humphrey, NOAA (2005)
Commander Guy T. Noll, NOAA (2006)

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-O325-RA-05 dated March 24, 2005, and all other applicable direction[I], with the exception of deviations noted in this report. The survey area is Point Humbug to 1.3 NM North of Green Point, and corresponds to sheet "B" in the sheet layout provided with the Letter Instructions. OPR-O325-RA-05 responds to a request from the USCG 13th District, Alaska Marine Pilots and other constituents.

One hundred percent shallow water multi-beam (SWMB) coverage was obtained in the survey area in waters 4 meters and deeper, with the exception of some minor holidays visible in the final BASE surfaces. In depths less than 4 meters additional SWMB coverage was obtained to acquire least depths over significant features or shoals, as appropriate for this survey. Vertical-beam echo sounder (VBES) data were acquired in depths from approximately 2 to 20 meters to define the navigable area limit, aid in the planning of SWMB data acquisition, and provide inshore bathymetry in navigationally significant areas.

Although not called for in the Letter Instructions, 200% side scan sonar (SSS) coverage was acquired in the main channel of Wrangell Narrows to improve probability of detection of submerged hazards in navigationally critical areas.

Limited shoreline verification was performed for survey H11448.

Data acquisition was conducted from April 22 to May 20, 2005 (DN 112 to 140), and on May 17 and 23 2006 (DNs 137 and 143).

[I] Standing Instructions for Hydrographic Surveys (March 2004), NOS Hydrographic Surveys Specifications and Deliverables (March 2004), OCS Field Procedures Manual for Hydrographic Surveying (March 2005), and all Hydrographic Surveys Technical Directives issued through May 2005.

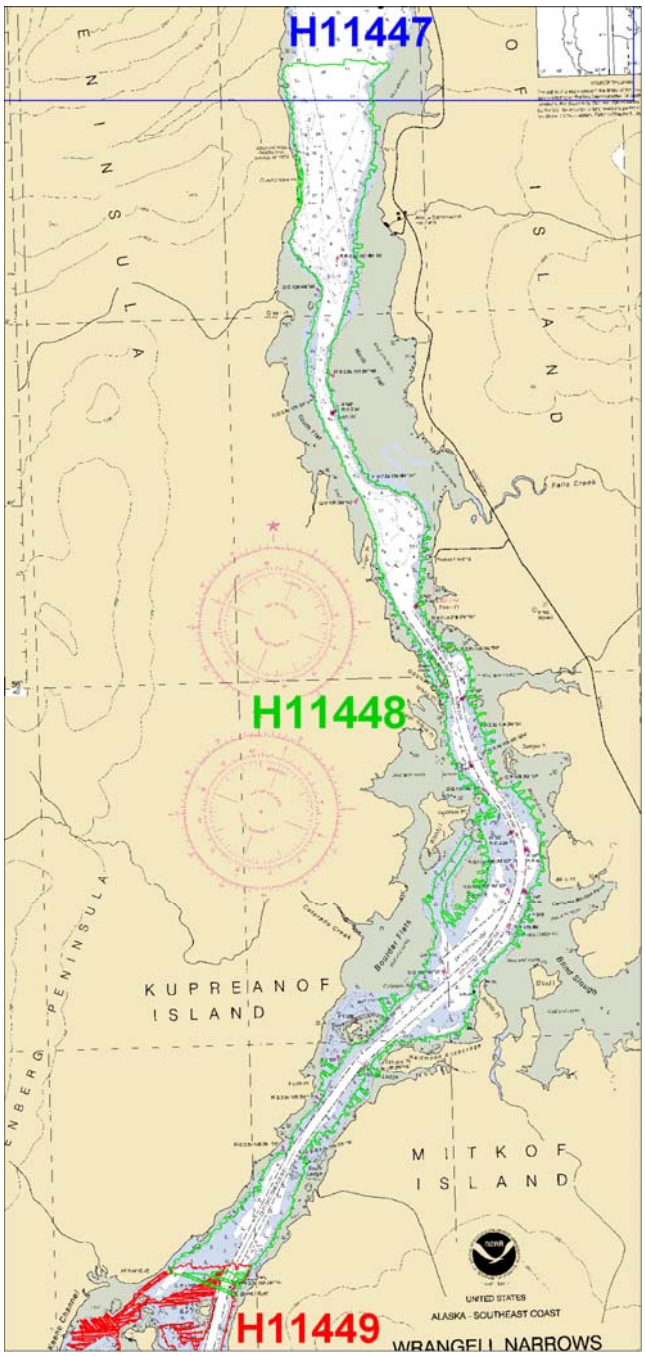

Figure 1. H11448 Survey limits and junction overlaid on Chart 17375.

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-O325-RA-05 Data Acquisition and Processing Report* (DAPR)[1], submitted under separate cover. Items specific to this survey, and any deviations from the aforementioned report are discussed in the following sections.

Final Approved Water Levels have been applied to all data collected in 2005 for this survey. Verified Water Levels with Preliminary Zoning have been applied to data collected in 2006 to correct a tide problem found in some of the 2005 data See Sections B & C. for additional information.

B1. Equipment and Vessels

Data for this survey were acquired by the following vessels:

Hull Number	Name	Acquisition Type
1103	RA-2	Vertical-Beam Echosounder Detached Positions Bottom Samples
1021	RA-3	Multi-Beam Echosounder
1016	RA-4	Multi-Beam Echosounder
1006	RA-5	Multi-Beam Echosounder
1015	RA-6	Multi-Beam Echosounder Hull Mounted Side Scan Sonar
817	RA-7	Vertical-Beam Echosounder Detached Positions

Table 1. Data Acquisition Vessels for H11448.

No unusual vessel configurations were used for data acquisition.

B2. Quality Control

Crosslines

Vertical Beam Echo Sounder (VBES) cross lines including buffer lines totaled 34.65 nautical miles, comprising 19 % of main scheme hydrography. Cross line and main scheme bathymetry were manually compared in CARIS HIPS subset mode. Cross lines generally agreed within 1 meter of main scheme hydrography. Occasional offsets of 1-1.5m were noted in the data, even after the application of final approved water levels.[2] See "Data Quality Factors" section below for additional discussion of vertical offsets in this dataset.

Shallow-Water Multibeam (SWMB) crosslines totaled 44.86 nautical miles, comprising 5% of SWMB hydrography. The main scheme bathymetry was manually compared to the XL nadir beams in CARIS subset mode and agreed well, with differences averaging approximately 0.5 meters.[3]

A statistical Quality Control Report was generated for data acquired in Sequim Bay at the start of the season to validate launch offsets and sonar biases. These were submitted to the Pacific Hydrographic Branch (PHB) under separate cover on April 28, 2005.[4]

Junctions

The following contemporary survey junctions with H11448 (Figure 1):

Registry #	Scale	Date	Junction side
H11447[5]	1:10,000	2006	North
H11449	1:10,000	2005	South

A cursory comparison with survey H11449 indicates differences are generally less than 0.25 meters in the region of overlapping coverage, and indicates no systematic errors or blunders.[6]

Data Quality Factors

Water Levels:

There are intermittent gaps in the water level time series acquired by subordinate tide station 945-1317, installed by RAINIER at Anchor Point. (See Section C below and the *OPR-O325-RA-05 Vertical Control Report*[7] for additional information.) The Final Approved Water Levels zoning file delivered by CO-OPS uses Station 945-0460 (Ketchikan, AK) as a backup to Anchor Point, and verified water levels from this station are available for all periods of outage at the primary gauge. However, soundings acquired while the Turn Point gauge was off line and corrected using these Ketchikan-based water levels exhibit internal inconsistency of up to 0.5 m, and are as much as 0.3 m shoaler than coincident soundings corrected with data from the local gauge. (See Figure 2.)

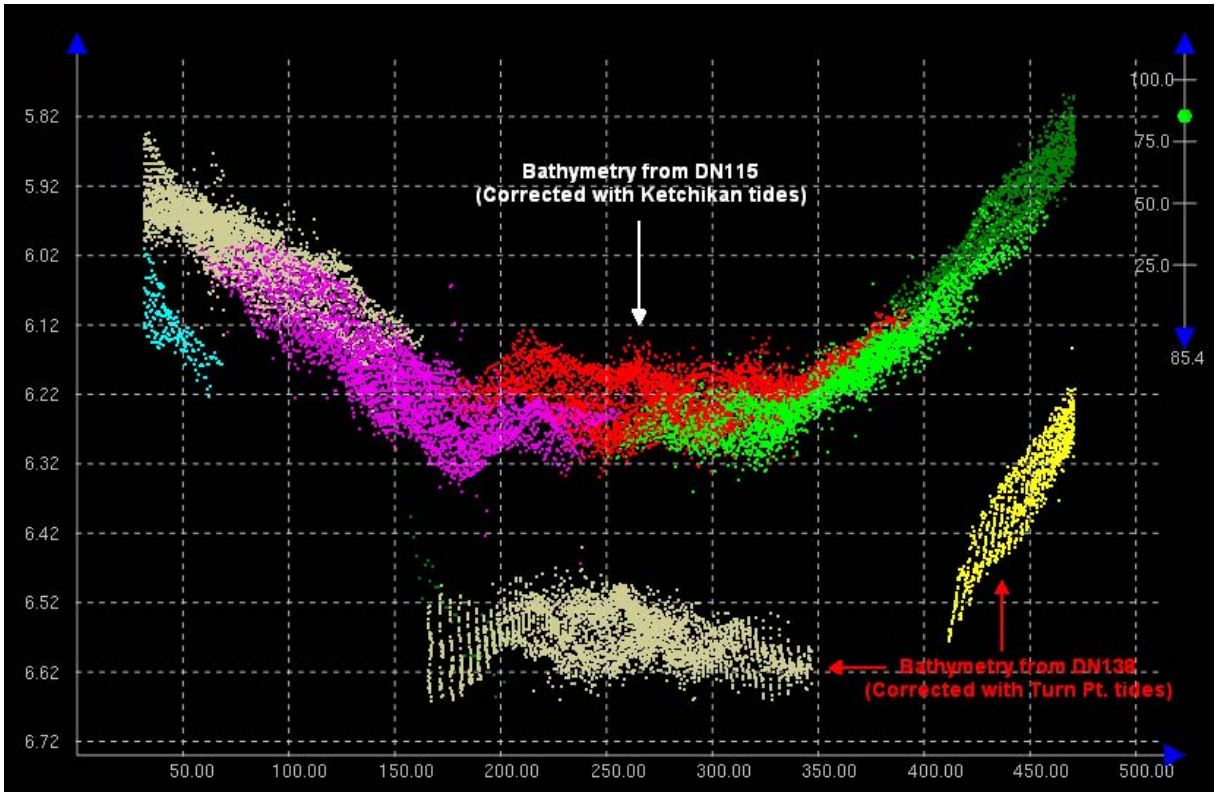

Figure 2. Comparison of bathymetry corrected with Ketchikan and Turn Point water levels, prior to re-acquisition in May 2006.

The hydrographer considered several possible explanations, including:

- Local meteorological effects.
- Timing or position errors.
- Corrector application errors in data processing software.
- Echosounder measurement error.

Analysis of the data does not conclusively support any of these potential causes. The hydrographer believes that a localized meteorological or hydrological effect in Wrangell Narrows during the Turn Point gauge outage is the most likely explanation. See email correspondence "Water levels and least depths in middle section of Wrangell Narrows"[8], filed with supplemental survey correspondence, for additional information.

To correct the tidal problem, lines were re-run over the most problematic areas when RAINIER returned to the area during the 2006 field season. Data acquired by vessel 1006 on DN 115 2005 was removed from the HDCS dataset and replaced with data acquired by vessel 1006 on DN137 & DN143, 2006. Although some minor tide problems (~0.2 meters) can still be found, this replacement data appears to have fixed the majority of the errors.[9]

Itinerant Features:

"Phantom contacts" appeared in SWMB data collected in the northern end of H11448, between navigational aid "R50" and the northern sheet limit. These features were typically large and relatively diffuse clouds of soundings, occasionally disconnected from the surrounding seabed. They rarely appeared in the same location on adjacent lines, and were not seen in development lines run over their previous locations on separate days (see Figure 3). Backscatter imagery from these contacts was inconclusive, revealing large areas of more intense return, but limited discernable shadow. The hydrographer concludes that these contacts are temporary in nature, and probably represent schools of fish, drifting clusters of aquatic vegetation, or similar innocuous mobile acoustic scatters. Soundings on these features have been rejected.

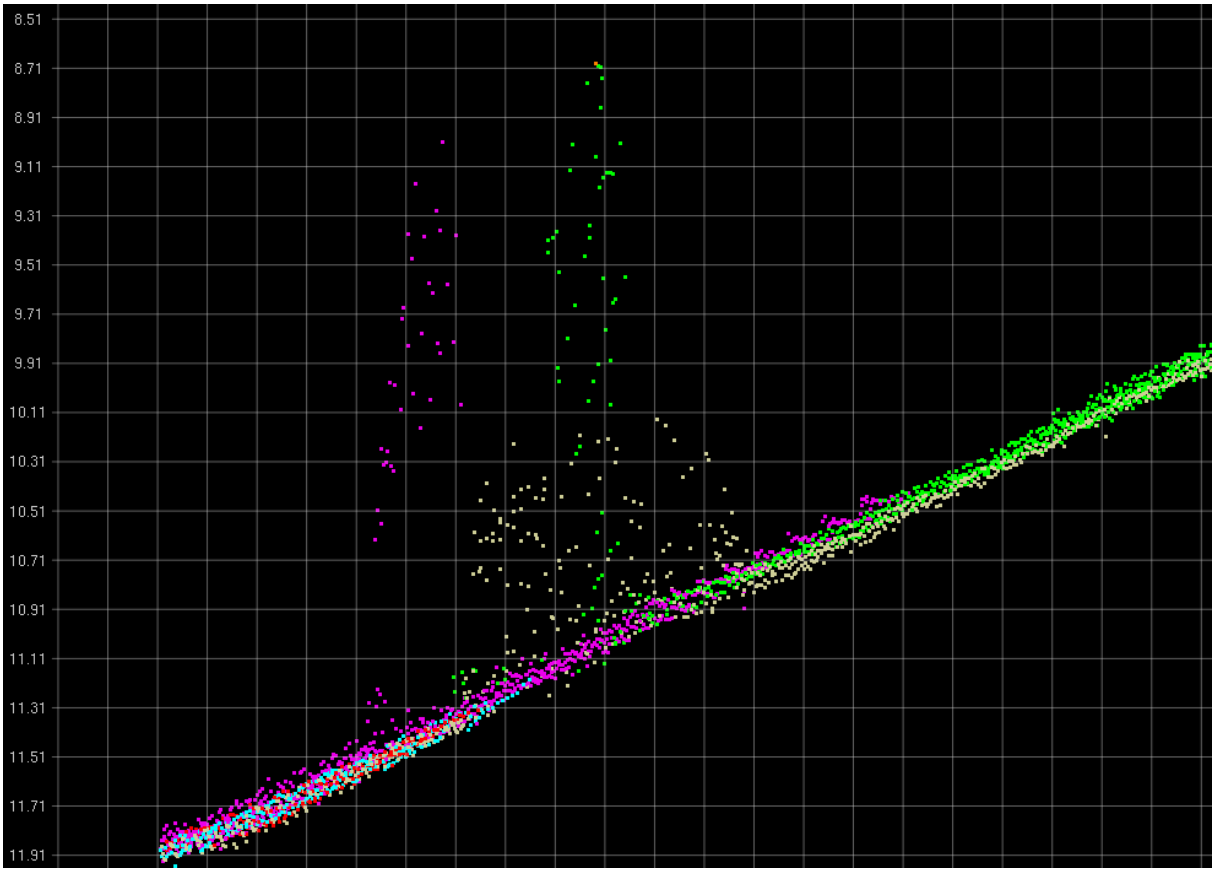

Figure 3. A "phantom contact" seen in 3 different lines run the same day (prior to rejection of soundings). Note the change in position and shape on each line.

VBES / MBES Disagreement:

Vertical beam echosounder data acquired with the Knudsen 320M on Vessels 1101 (RA-1)[10] and 1103 (RA-2) occasionally exhibited an offset of up to +/-0.3m from overlapping multi-beam echosounder coverage. Several attempts have been made to isolate the source of this error, but the data compares well in controlled tests over flat bathymetry. The hydrographer suggests that this offset may be due to the wider beam width of the VBES transducer, less accurate horizontal positioning in Vessels 1101 and 1003, variable loading effects, or a

combination of factors. VBES soundings which did not agree with overlapping multibeam coverage and unduly influenced the BASE Surface have been rejected. The hydrographer recommends that VBES data be honored only when no coincident multibeam coverage is available.[11]

Ross 950 Vertical Offset:
Singlebeam depth data collected by the Ross portable VBES system was found to be unusable due to a persistent and unexplained offset of 0.3 to 1.5 m from all other echosounders used for this survey. Although the Ross HDCS data was retained for orientation purposes of shoreline and point features, the depth data was not included in the final submission BASE surfaces.

B3. Data Reduction

Data reduction procedures for survey H11448 conform to those detailed in the *OPR-O325-RA-05 DAPR.*

B4. Data Representation

Three BASE surfaces were used for the processing of H11448. Figures 4 and 5 show the final submission structure. BASE surface resolutions were chosen as a function of depth range as described in the Field Procedures Manual.

Side Scan Sonar data was split into two complete coverage mosaics to demonstrate areas covered by this technique (in addition to the required 100% SWMB). These mosaics were created at 2m resolution and named “H11448_SSS100” and “H11448_SSS200”.

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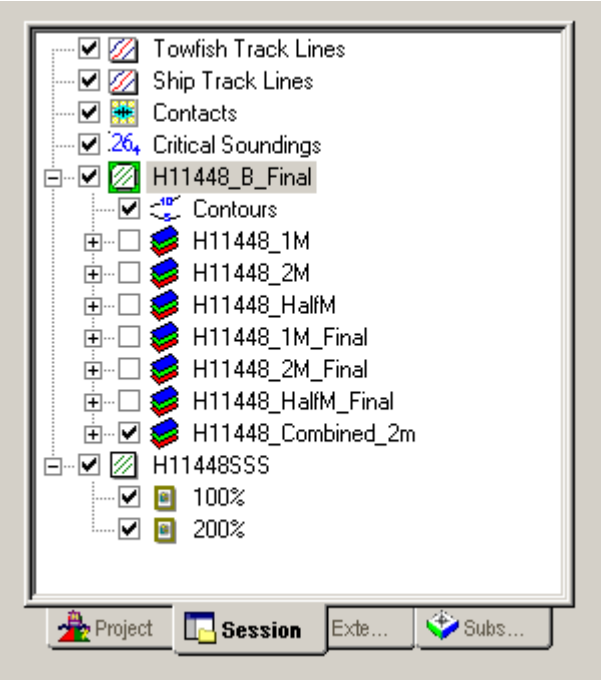

Figure 4. Field sheet and BASE surfaces submitted with H11448

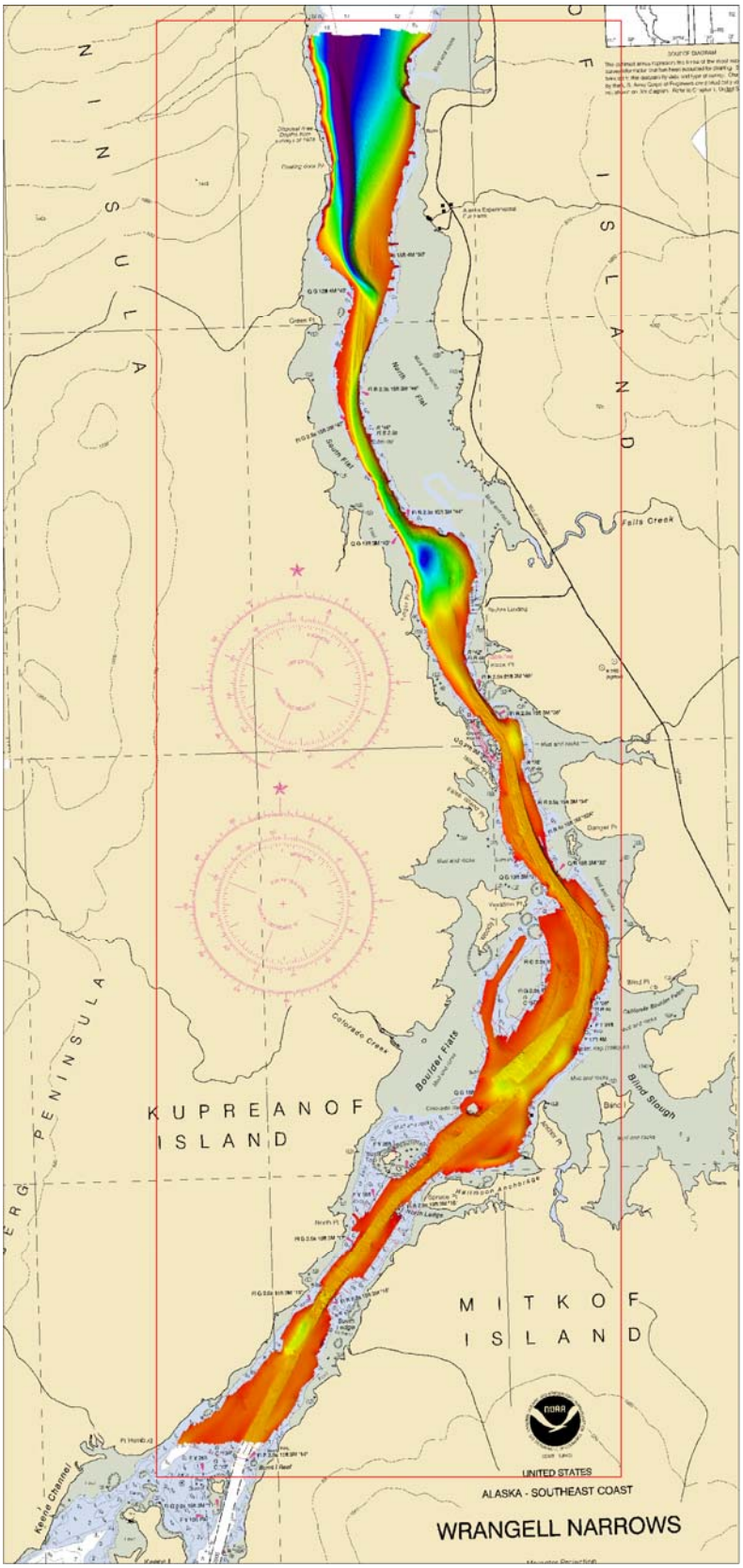

Figure 5. H11448 Field Sheet and BASE Surface layout overlaid on NOAA Chart 17375.

C. VERTICAL AND HORIZONTAL CONTROL

A complete description of vertical and horizontal control for survey H11448 can be found in the *OPR-O325-RA-05 Horizontal and Vertical Control Report*, submitted under separate cover. A summary of horizontal and vertical control for this survey follows.

Horizontal Control

The horizontal datum for this project is the North American Datum of 1983 (NAD83). Differential GPS (DGPS) was the sole method of positioning. The differential corrector beacons utilized for this survey are given in Table 2

Location	Frequency	Custodian	Distance	Priority
Level Island	295 kHz	USCG	13 nm	Primary
Annette Island	323 kHz	USCG	105 nm	Secondary

Table 2. Differential Corrector Sources for H11448.

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, AK (945-0460) served as control for datum determination and as the primary source for water level reducers for survey H11448.

For 2005 field operations, RAINIER personnel installed Sutron 8210 “bubbler” tide gauge at the subordinate station (945-1317) Anchor Point in accordance with the Letter Instructions. The original tide gauge installed was discovered to have ceased logging data on two separate occasions and was replaced on 5/17/05. This station is described in detail in the *OPR-O325-RA-05 Horizontal and Vertical Control Report*.

For 2006 field operations, RAINIER personnel installed Sutron 8210 “bubbler” tide gauge at the subordinate station (945-0434) Turn Point in accordance with the OPR-O325-RA-06 Hydrographic Survey Letter Instructions. This station is described in detail in the *OPR-O325-RA-06 Horizontal and Vertical Control Report*. [12]

All data acquired in 2005 were reduced to MLLW using final approved water levels from stations Anchor Point, AK (945-1317) and Ketchikan, AK (945-0460) using the tide file 9451317.tid and 9450460.tid, with final time and height correctors from zone corrector file O325RA2005CORP.ZDF.

All data collected in 2006 were reduced to MLLW using verified observed water levels from station Ketchikan, AK (945-0460) using the tide file 9450460.tid, with the 2005 final time and height correctors from zone corrector file O325RA2005CORP.ZDF.

Final Approved Water Levels for H11448 (2005 data) were requested from CO-OPS on July 27, 2005 and received on November 9, 2005. At CO-OPS' direction, on June 22, 2006 RAINIER submitted a second request for Final Approved Water Levels covering only the times and area of hydrography for 2006 data acquisition (see email traffic between RAINIER, CO-OPS, HSD Ops, and PHB dated May 31, 2006). All pertinent tide requests, correspondence, and documentation are included in Appendix IV.[13]

D. RESULTS AND RECOMMENDATIONS

D.1. Chart Comparison

D.1.a. Survey Agreement with Chart

Survey H11448 was compared with the following charts:

Chart	Scale	Edition and Date	Latest Notice to Mariners Applied
17375	1:20,000	21st Ed.; April. 2004	4/10/2004
13760	1:217,828	33rd Ed; May 2003	5/17/2003

Table 3. Charts compared with H11448

Chart 17375

Survey soundings from H11448 generally agreed well with depths on chart 17375. In areas of relatively flat bathymetry differences were typically less than one fathom. Cartographic generalization on the steep margins of the Wrangell Narrows channel produced some areas with disagreement of up to 2 fathoms. The hydrographer recommends that survey soundings supersede charted depths in the common area.[14]

Significant discrepancies were noted between survey soundings and tabulated depths in the federal project channel. The notated channel depth is 23 or 23.5 feet[15] throughout the survey region, however survey bathymetry indicates numerous shallower areas (See Figure 6). These shoal soundings were located on both point features (submerged rocks) and areas (outcroppings or sediment shoals). The minimum depth found in the channel is a 19 foot sounding on a large boulder located mid-channel in the vicinity of G"19"[16]. See the Pydro PSS, Feature Plot, and Feature Report[17] (Appendix I) for additional information. Due to their location in a U.S. Army Corps of Engineers maintained channel, these shoal soundings have not been reported as Dangers to Navigation.[18] The USACOE Alaska District has been notified of these discrepancies, and is planning to conduct their own data analysis and possible dredging (See email "H11448 23ft Shoals Wrangell Narrows" in Appendix V). In the interim, the hydrographer recommends that the notated depths be revised to reflect minimum depths from the current survey.[19]

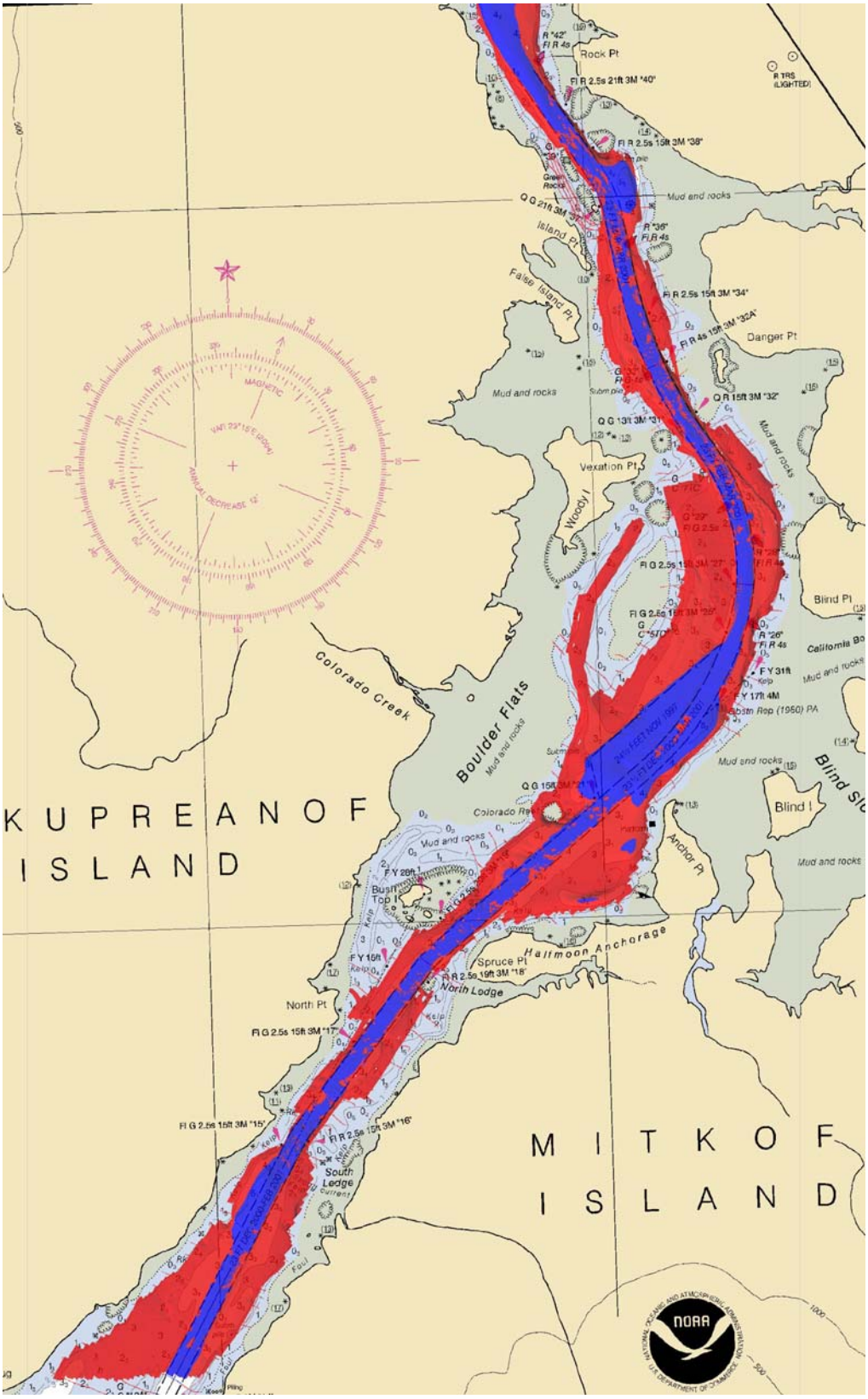

Figure 6. H11448 BASE Surface bathymetry overlaid on Chart 17375. Areas of survey soundings less than 23 feet are red; 23 feet and deeper are blue.

Chart 17360

Chart 17360 does not contain soundings for the Wrangell Narrows area. However it should be noted that shoreline information of this chart is not as accurate as Chart 17375 and shows a general offset of 150m to the northwest. The hydrographer suggests that this may be due to the shift from NAD 27 to NAD83. The hydrographer recommends that shoreline data from survey H11448 supersede that of chart 17360.[20]

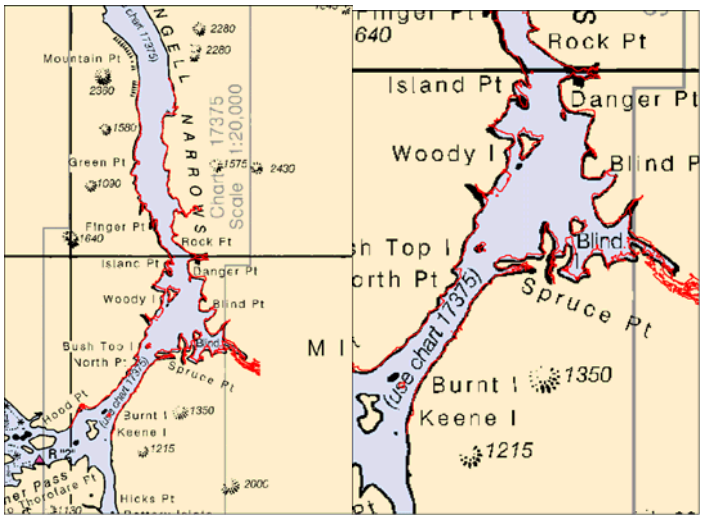

Figure 7. Shoreline discrepancies for Chart 17360.

Final chart comparisons will be made at the Pacific Hydrographic Branch.[21]

D.1.b. Dangers to Navigation

One Danger to Navigation was found in survey H11448, and was reported to MCD on July 8, 2006.[22] The original DTON submission package is included in Appendix IV. A descriptions of the DTON is included in the Survey Feature Report in Appendix I.

D.1.c. Other Features

Automated Wreck and Obstruction Information System (AWOIS) Investigations

Five (5) AWOIS items fall the within the survey limits of H11448. Descriptions of each AWOIS item investigation are included in the Survey Feature Report[23] in Appendix I.

Additional Items

Several large rocks were found in the federally maintained main channel of Wrangell Narrows, as discussed in Section D.1.a above. These items and additional features investigated within the limits of H11448 are described in the Survey Feature Report in Appendix II.

D.2. Additional Results

D.2.a. Prior Survey Comparison

Prior survey comparison with H11448 was not performed.

D.2.b. Shoreline Verification

Shoreline Source

Topographic photo surveys TP00637 and TP00438 were supplied by N/NGS3 in the form of cartographic feature file (CFF) CM7309. RAINIER conducted limited shoreline verification of the CFF. In addition, features shown on the current editions of charts 17375 and 17360 and prior surveys H09729 and H09795 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 Trimble ProXRS DGPS receivers with TSCe data collectors, 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 the *Separates to be Included with Survey Data.*[24]

A detailed feature plot in MapInfo format is provided showing all detached positions and bottom samples with notes relating to each feature. Verified CFF shoreline that did not require revision is in MapInfo table H11448_Shoreline and shown in black. Charted shoreline, when used for reference purposes or when source data were not available, is depicted in the MapInfo table "H11122_Charted_Shoreline" and displayed in brown. New MHW features and changes to the MHW shoreline, CFF or charted, are displayed in red in the "H11448_Shoreline_Updates" MapInfo table. New features and changes to low water shoreline, CFF or charted, are displayed in pink in the "H111448_Shoreline_Updates" MapInfo table. CFF features are depicted in black and are found in the MapInfo table "H11448_CFF_Rocks." Charted features, when used for reference purposes or when source data were not available, are depicted in brown and are found in the MapInfo table "H11448_Charted_Rocks."

Source Shoreline Changes and New Features

Items for survey H11448 that require further discussion and are associated with a detached position have been flagged "Report" in Pydro in H11448_final.pss. Investigation methods and recommendations are listed in the Remarks and Recommendation tabs. These features are included in the Survey Feature Report in Appendix II.

Recommendations

The Hydrographer recommends that the shoreline as depicted on the Detached Position and Bottom Sample MapInfo digital file supersede and complement shoreline information compiled on the CFF and charts as noted.[25] 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 "H11448_ShorelineNotes."

D.2.c. Aids to Navigation

All aids to navigation (ATONs) were found to be correctly charted and serve their intended purpose.

Fixed ATONs were positioned using static GPS survey methods. Detached positions were taken on all other ATONs for verification purposes only.[26] Information regarding the fixed ATONs positions can be found in the in the *OPR-O325-RA-05 Horizontal and Vertical Control Report*.

D.2.d. Overhead features

There are no overhead features in survey H11448.

D.2.e. Submarine Cables and Pipelines

No submarine cables or pipelines were found in the navigable areas of survey H11448.

D.2.f. Ferry Routes

The Alaskan State Marine Highway System makes regularly scheduled passages through Wrangell Narrows to service the communities of Southeast Alaska.

D.2.g. Bottom Samples

Seven bottom samples were collected for survey H11448. Sample locations coincide with prior bottom sample positions and are described in the PSS and plotted on the DP & BS plot. Bottom sample characteristics were consistent with the prior charted samples.[27]

D.2.h Miscellaneous

- The hydrographer recommends that Chart 17375 be recompiled with all charted and notated depths in feet. The majority of the area covered by this chart is quite shallow (less than 30 feet), and would be more precisely and neatly portrayed in feet than the current fathoms. Additionally, the notated Wrangell Narrows federal project channel

depths are given in feet while the surrounding area is charted in fathoms, creating a potential source of confusion for the mariner.[28]

- Tidal currents in Wrangell Narrows are very strong, creating a near river environment during the ebb and floods stages. Currents experienced by survey launches during operations in this area often disagreed with predictions. The hydrographer recommends CO-OPS conduct current observations in this waterway.
- The area surrounding Wrangell Narrows has grown substantially more populated over the last 20 years and with that growth has come many cultural features (i.e. docks and homes) along with an increase in small boat traffic.
- During survey operations charted patches of CFF kelp were not present although these areas were observed to be shallow with a rocky bottom. This survey was conducted outside of the kelp growing season. Areas charted as kelp should remain as charted.[29]

E. ADDITIONAL DOCUMENTATION

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

Title	Date Sent	Office
Data Acquisition and Processing Report for OPR-O325-RA-05	April 24, 2006	N/CS34
Horizontal Control Report for OPR-O325-RA-05	April 24, 2006	N/CS34
Vertical Control Report for OPR-O325-RA-05	April 24, 2006	N/CS34
Tides and Water Levels Package for OPR-O325-RA-05	Nov. 9, 2005	N/OPS1
Coast Pilot Report for OPR-O325-RA-05	April 24, 2006	N/CS26

[1] Filed with project records.
[2] Data with 1 to 1.5m offsets not submitted to the Pacific Hydrographic Branch (PHB).
[3] Concur.
[4] Filed with hydrographic records.
[5] Section B2 of the descriptive report from H11447 states that "Depths from survey H11448 were compared to depths from survey H11447 by concurrently viewing the two preliminary smooth sheets in Mapinfo 8.0. Survey H11448 junctions well with this survey; a cursory comparison indicates differences are generally less than 0.3 meter. A few of the soundings in the junction areas differ by up to 0.7 meters, especially in the southwest section of the junction. This may be due to differences in the sounding selection algorithm. Depths in survey H11447 were processed and delivered using CUBE, while depths in survey H11448 were processed and delivered using a TPE-weighted BASE surface."
[6] Concur.
[7] Filed with project records.
[8] Filed with hydrographic records.
[9] Concur.
[10] According to section 1, table B1 RA-1 was not used for this survey. Furthermore there no data from RA-1 was submitted with H11448.
[11] Concur with clarification, with the exception of a bypass near Green Rocks west of the channel from 56-40-09.2N, 132-56-09.1W to 56-39-54.4N, 132-55-56.5W VBES data was not used for compilation.
[12] Filed with project records.
[13] Tide notes for 2005 and 2006 are appended to this report.
[14] Concur.
[15] The most recent publication of the chart has shoaler tabulated depths for the channel.

North point of channel section	South point of channel section	Corrected through LNM 09/04	Corrected through LNM 02/08
56-40-21.8N, 132-56-17.2W	56-39-31.8N, 132-55-39.7W	23 ft	20 ft
56-39-31.8N, 132-55-39.7W	56-38-54.7N, 132-55-15.0W	23 ft	20 ft
56-38-54.7N, 132-55-15.0W	56-37-53.5N, 132-56-54.6W	23.5 ft	21 ft
56-37-53.5N, 132-56-54.6W	56-36-41.1N 132-57-46.1W	23 ft	20 ft

Many of the features originally selected as shoaler than least depths of channel are now deeper than the tabulated depths and are compiled to the HCell. Specific details pertaining to each of the features is in the features report appended to this report.
[16] The boulder located at 56-38-01.5N, 132-56-36.77W is recommended for charting as a rock with a least depth of three fathoms and one foot.
[17] This report has been updated to reflect charting recommendations made at PHB. The appended feature reports, attached, contain updated information about all contacts.
[18] On October 25th 2007 31 DTONs were submitted from PHB to reflect the shoaler depths in the channel. A subsequent newer edition of the chart shows shoaler tabulated depths in the channel. Thus the attached DTONs report reflects the changes. Several of the DTONs were not charted because of the new shoaler channel depths. For specifics refer to the attached DTONs report.
[19] Concur with clarification. Only depths shoaler than currently tabulated depths have been recommended for charting.
[20] Concur.

[21] Final chart comparisons have been performed at PHB, the results of the chart comparisons are documented in the Survey Acceptance Review.
[22] Do not concur, 32 DTONs were reported, 31 of which were found during office processing.
[23] AWOIS report appended to this report.
[24] Filed with hydrographic records.
[25] Concur.
[26] Chart using the latest ATONIS information.
[27] All bottom samples acquired from H11448 have been recommended for charting.
[28] Concur. The evaluator recommends that the Marine Chart Division (MCD) changes the units of 17375 from fathoms and feet to feet upon the next publication of the chart.
[29] Concur.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of Marine and Aviation Operations
NOAA Ship RAINIER (S221)
1801 Fairview Ave E, Seattle, WA 98102

July 10, 2006

MEMORANDUM FOR: CDR Donald W. Haines, NOAA
Chief, Pacific Hydrographic Branch

FROM: CDR Guy T. Noll, NOAA
Commanding Officer

SUBJECT: Approval of Hydrographic Survey H11448

Field operations for hydrographic survey H11448 were conducted under the direct supervision of the previous Commanding Officer, CDR John W. Humphrey, with frequent personal checks of progress and adequacy. I have reviewed the attached survey data and reports. The survey data meets or exceeds requirements as set forth in the NOS Hydrographic Surveys and Specifications Deliverables Manual, Field Procedures Manual, Standing and Letter Instructions, and HSD Technical Directives. These data are adequate to supersede charted data in their common areas. This survey is complete and no additional work is required. All data and reports are respectfully submitted to N/CS34, Pacific Hydrographic Branch.

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

Survey Sheet Manager: _____
For Gregory J. King
Survey Technician, NOAA Ship RAINIER

Tides Officer: _____
For Briana J. Welton
Lieutenant (junior grade), NOAA

Horizontal Control Officer: _____ for Andrew P. Halbach
Andrew P. Halbach
Lieutenant (junior grade), NOAA

Chief Survey Technician: _____
James B. Jacobson
Chief Survey Technician, NOAA Ship RAINIER

Field Operations Officer: _____
Benjamin K. Evans
Lieutenant, NOAA

H11448_DTON_REPORT

Registry Number: H11448

State: AK

Locality: Wrangell Narrows

Sub-locality: Point Humbug to 1.3 NM North of Green Point

Project Number: OPR-O325-RA-05

Survey Date: 04/23/2005

Charts Affected

Number	Version	Date	Scale
17375	21st Ed.	04/01/2004	1:20000
17360	33rd Ed.	05/01/2003	1:217828
16016	20th Ed.	11/01/2003	1:969756
531	22nd Ed.	03/01/2004	1:2100000
500	8th Ed.	06/01/2003	1:3500000
530	30th Ed.	03/23/2002	1:4860700
50	6th Ed.	06/01/2003	1:10000000

Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	Sounding	4.92 m	056° 38' 16.379" N	132° 55' 59.191" W	---

1 - Danger To Navigation

1.1) Profile/Beam - 302/25 from h11448 / 1021_reson8101_hvf / 2005-113 / 311_1857

DANGER TO NAVIGATION

Survey Summary

Survey Position: 056° 38' 16.379" N, 132° 55' 59.191" W

Least Depth: 4.92 m

Timestamp: 2005-113.18:57:42.189 (04/23/2005)

Survey Line: h11448 / 1021_reson8101_hvf / 2005-113 / 311_1857

Profile/Beam: 302/25

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1m off bottom just outside of the dredged channel

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1021_reson8101_hvf/2005-113/311_1857	302/25	0.00	000.0	Primary

Hydrographer Recommendations

Chart sounding only.

Office Note: Concur with clarification, chart rock with sounding.

Cartographically-Rounded Depth (Affected Charts):

2 ¾fm (17360_1, 16016_1, 530_1)

2fm 4ft (17375_3, 531_1)

4.9m (500_1, 50_1)

S-57 Data

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

Attributes: VALSOU - 4.920 m

WATLEV - 3:always under water/submerged

H11448 DTONs

Registry Number: H11448

State: Alaska

Locality: Wrangell Narrows, AK

Sub-locality: Point Humbug to 1.3 NM North of Green Point

Project Number: OPR-O325-RA-06

Survey Dates: 04/23/2005 - 05/23/2006

Charts Affected

Number	Version	Date	Scale
17375	21st Ed.	04/01/2004	1:20000
17360	34th Ed.	03/01/2006	1:217828
16016	20th Ed.	11/01/2003	1:969756
531	23rd Ed.	01/01/2006	1:2100000
500	8th Ed.	06/01/2003	1:3500000
530	31st Ed.	06/01/2005	1:4860700
50	6th Ed.	06/01/2003	1:10000000

Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude
1.1	Sounding	2.11 m	56° 39' 20.447" N	132° 55' 24.399" W
1.2	Sounding	5.61 m	56° 39' 26.546" N	132° 55' 33.109" W
1.3	Sounding	5.93 m	56° 37' 52.538" N	132° 56' 52.715" W
1.4	Sounding	5.94 m	56° 38' 01.514" N	132° 56' 36.675" W
1.5	Sounding	6.00 m	56° 37' 21.878" N	132° 57' 38.031" W
1.6	Sounding	6.07 m	56° 39' 49.465" N	132° 55' 47.720" W
1.7	Sounding	6.15 m	56° 39' 16.840" N	132° 55' 21.229" W
1.8	Sounding	6.21 m	56° 40' 14.561" N	132° 56' 07.740" W
1.9	Sounding	6.24 m	56° 40' 02.456" N	132° 55' 55.052" W
1.10	Sounding	6.29 m	56° 39' 18.547" N	132° 55' 28.930" W
1.11	Sounding	6.31 m	56° 37' 38.745" N	132° 57' 13.613" W
1.12	Sounding	6.31 m	56° 39' 27.871" N	132° 55' 34.905" W

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1.13	Sounding	6.38 m	56° 37' 24.698" N	132° 57' 35.620" W
1.14	Sounding	6.44 m	56° 39' 13.812" N	132° 55' 20.520" W
1.15	Sounding	6.45 m	56° 39' 31.159" N	132° 55' 38.435" W
1.16	Sounding	6.49 m	56° 37' 05.285" N	132° 57' 52.563" W
1.17	Sounding	6.52 m	56° 38' 49.358" N	132° 55' 17.991" W
1.18	Sounding	6.53 m	56° 39' 21.561" N	132° 55' 28.845" W
1.19	Sounding	6.58 m	56° 38' 17.770" N	132° 55' 58.874" W
1.20	Sounding	6.62 m	56° 39' 46.407" N	132° 55' 46.154" W
1.21	Sounding	6.62 m	56° 40' 10.107" N	132° 56' 03.867" W
1.22	Sounding	6.64 m	56° 37' 31.082" N	132° 57' 26.737" W
1.23	Sounding	6.64 m	56° 39' 55.502" N	132° 55' 51.373" W
1.24	Sounding	6.66 m	56° 38' 15.613" N	132° 56' 08.453" W
1.25	Sounding	6.72 m	56° 39' 39.348" N	132° 55' 45.303" W
1.26	Sounding	6.73 m	56° 39' 03.939" N	132° 55' 16.003" W
1.27	Sounding	6.78 m	56° 37' 39.085" N	132° 57' 17.081" W
1.28	Sounding	6.80 m	56° 37' 48.199" N	132° 57' 00.638" W
1.29	Sounding	6.81 m	56° 37' 50.792" N	132° 56' 59.367" W
1.30	Sounding	6.91 m	56° 38' 32.499" N	132° 55' 33.370" W
1.31	Sounding	6.94 m	56° 38' 26.957" N	132° 55' 42.492" W

1 - Features from Bathymetry

1.1) Profile/Beam - 2062/85 from h11448 / 1006_reson8101_hvf / 2006-143 / 740_1936

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 39' 20.447" N, 132° 55' 24.399" W
Least Depth:	2.11 m
Timestamp:	2006-143.19:38:22.897 (05/23/2006)
Survey Line:	h11448 / 1006_reson8101_hvf / 2006-143 / 740_1936
Profile/Beam:	2062/85
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

6.93 ft sounding directly outside charted (17375) 23 ft channel. The shoal sounding is seaward of the three fathom curve.

Hydrographer Recommendations

Shoal sounding should be charted

Cartographically-Rounded Depth (Affected Charts):

1fm (17360_1, 16016_1, 530_1)

1fm 1ft (17375_3, 531_1)

2.1m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Concur with clarification, shoal sounding is rock. Chart as rock with sounding.

1.2) Profile/Beam - 185/38 from h11448 / 1006_reson8101_hvf / 2005-138 / 636_1808

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 39' 26.546" N, 132° 55' 33.109" W
Least Depth:	5.61 m
Timestamp:	2005-138.18:08:19.561 (05/18/2005)
Survey Line:	h11448 / 1006_reson8101_hvf / 2005-138 / 636_1808
Profile/Beam:	185/38
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

18.39 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3fm (17360_1, 16016_1, 530_1)

3fm 0ft (17375_3, 531_1)

5.6m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Concur with clarification, shoal sounding is rock. Chart as rock with sounding.

1.3) Profile/Beam - 2117/33 from h11448 / 1021_reson8101_hvf / 2005-113 / 360_1737

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 37' 52.538" N, 132° 56' 52.715" W
Least Depth:	5.93 m
Timestamp:	2005-113.17:39:55.099 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 360_1737
Profile/Beam:	2117/33
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

19.46 ft sounding in charted (17375) 23.5 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ¼fm (17360_1, 16016_1, 530_1)

3fm 1ft (17375_3, 531_1)

5.9m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Concur. Chart sounding.

1.4) Profile/Beam - 1219/35 from h11448 / 1021_reson8101_hvf / 2005-113 / 349_1813

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 38' 01.514" N, 132° 56' 36.675" W
Least Depth:	5.94 m
Timestamp:	2005-113.18:15:07.963 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 349_1813
Profile/Beam:	1219/35
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

19.48 ft sounding on rock in charted (17375) 23.5 ft channel. RAINIER divers confirmed existence of large submerged boulder, distinct from underlying bedrock.

Hydrographer Recommendations

Shoal sounding on rock should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ¼fm (17360_1, 16016_1, 530_1)

3fm 1ft (17375_3, 531_1)

5.9m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Concur. Chart rock with shoal sounding.

1.5) Profile/Beam - 5453/42 from h11448 / 1021_reson8101_hvf / 2005-113 / 374_1714

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 37' 21.878" N, 132° 57' 38.031" W
Least Depth:	6.00 m
Timestamp:	2005-113.17:20:28.113 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 374_1714
Profile/Beam:	5453/42
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

19.67 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ¼fm (17360_1, 16016_1, 530_1)

3fm 1ft (17375_3, 531_1)

6.0m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Concur with clarification. Chart rock with sounding.

1.6) Profile/Beam - 2313/98 from h11448 / 1006_reson8101_hvf / 2006-143 / 725_1949

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 39' 49.465" N, 132° 55' 47.720" W
Least Depth:	6.07 m
Timestamp:	2006-143.19:52:25.139 (05/23/2006)
Survey Line:	h11448 / 1006_reson8101_hvf / 2006-143 / 725_1949
Profile/Beam:	2313/98
Charts Affected:	17375_1, 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

19.91 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ¼fm (17360_1, 16016_1, 530_1)

3fm 2ft (17375_1, 17375_3, 531_1)

6.0m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Sounding of 19.91 ft rounds to 20 ft. Controlling depth of channel (02/08) is 20 ft. Do not chart sounding.

1.7) Profile/Beam - 720/21 from h11448 / 1021_reson8101_hvf / 2005-113 / 217_2240

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 39' 16.840" N, 132° 55' 21.229" W
Least Depth:	6.15 m
Timestamp:	2005-113.22:41:39.382 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 217_2240
Profile/Beam:	720/21
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

20.18 ft sounding on edge of charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ¼fm (17360_1, 16016_1, 530_1)

3fm 2ft (17375_3, 531_1)

6.1m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.8) Profile/Beam - 1613/78 from h11448 / 1021_reson8101_hvf / 2005-113 / 177_2110

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 40' 14.561" N, 132° 56' 07.740" W
Least Depth:	6.21 m
Timestamp:	2005-113.21:12:44.877 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 177_2110
Profile/Beam:	1613/78
Charts Affected:	17375_1, 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

20.36 foot sounding in charted (17375) 23 foot channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ¼fm (17360_1, 16016_1, 530_1)

3fm 2ft (17375_1, 17375_3, 531_1)

6.2m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.9) Profile/Beam - 519/42 from h11448 / 1021_reson8101_hvf / 2005-113 / 190_2133

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 40' 02.456" N, 132° 55' 55.052" W
Least Depth:	6.24 m
Timestamp:	2005-113.21:33:47.671 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 190_2133
Profile/Beam:	519/42
Charts Affected:	17375_1, 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

20.49 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ¼fm (17360_1, 16016_1, 530_1)

3fm 2ft (17375_1, 17375_3, 531_1)

6.2m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.10) Profile/Beam - 768/91 from h11448 / 1021_reson8101_hvf / 2005-113 / 554_2226

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 39' 18.547" N, 132° 55' 28.930" W
Least Depth:	6.29 m
Timestamp:	2005-113.22:27:42.030 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 554_2226
Profile/Beam:	768/91
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

20.63 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 2ft (17375_3, 531_1)

6.3m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.11) Profile/Beam - 3457/30 from h11448 / 1021_reson8101_hvf / 2005-113 / 357_1741

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 37' 38.745" N, 132° 57' 13.613" W
Least Depth:	6.31 m
Timestamp:	2005-113.17:44:52.381 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 357_1741
Profile/Beam:	3457/30
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

20.69 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 2ft (17375_3, 531_1)

6.3m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.12) Profile/Beam - 2028/17 from h11448 / 1021_reson8101_hvf / 2005-113 / 215_2234

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 39' 27.871" N, 132° 55' 34.905" W
Least Depth:	6.31 m
Timestamp:	2005-113.22:36:54.568 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 215_2234
Profile/Beam:	2028/17
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

20.70 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 2ft (17375_3, 531_1)

6.3m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.13) Profile/Beam - 5787/15 from h11448 / 1021_reson8101_hvf / 2005-113 / 374_1714

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 37' 24.698" N, 132° 57' 35.620" W
Least Depth:	6.38 m
Timestamp:	2005-113.17:20:51.075 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 374_1714
Profile/Beam:	5787/15
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

20.93 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 3ft (17375_3, 531_1)

6.4m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.14) Profile/Beam - 281/25 from h11448 / 1021_reson8101_hvf / 2005-113 / 221_2255

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 39' 13.812" N, 132° 55' 20.520" W
Least Depth:	6.44 m
Timestamp:	2005-113.22:56:02.923 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 221_2255
Profile/Beam:	281/25
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

21.12 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 3ft (17375_3, 531_1)

6.4m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.15) Profile/Beam - 245/56 from h11448 / 1021_reson8101_hvf / 2005-113 / 214_2231

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 39' 31.159" N, 132° 55' 38.435" W
Least Depth:	6.45 m
Timestamp:	2005-113.22:31:30.125 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 214_2231
Profile/Beam:	245/56
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

21.15 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 3ft (17375_3, 531_1)

6.4m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.16) Profile/Beam - 2922/83 from h11448 / 1021_reson8101_hvf / 2005-113 / 376_1729

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 37' 05.285" N, 132° 57' 52.563" W
Least Depth:	6.49 m
Timestamp:	2005-113.17:32:44.379 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 376_1729
Profile/Beam:	2922/83
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

21.30 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 3ft (17375_3, 531_1)

6.5m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.17) Profile/Beam - 7295/97 from h11448 / 1006_reson8101_hvf / 2006-137 / 008_1711

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 38' 49.358" N, 132° 55' 17.991" W
Least Depth:	6.52 m
Timestamp:	2006-137.17:17:32.437 (05/17/2006)
Survey Line:	h11448 / 1006_reson8101_hvf / 2006-137 / 008_1711
Profile/Beam:	7295/97
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

21.39 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding chould be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 3ft (17375_3, 531_1)

6.5m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 21 ft.

1.18) Profile/Beam - 1561/33 from h11448 / 1021_reson8101_hvf / 2005-113 / 214_2231

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 39' 21.561" N, 132° 55' 28.845" W
Least Depth:	6.53 m
Timestamp:	2005-113.22:33:01.279 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 214_2231
Profile/Beam:	1561/33
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

21.43 ft sounding in charted (17375) 23 ft sounding

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 3ft (17375_3, 531_1)

6.5m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.19) Profile/Beam - 226/12 from h11448 / 1021_reson8101_hvf / 2005-113 / 309_1906

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 38' 17.770" N, 132° 55' 58.874" W
Least Depth:	6.58 m
Timestamp:	2005-113.19:06:37.720 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 309_1906
Profile/Beam:	226/12
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

21.58 ft sounding in charted (17375) 23.5 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 3ft (17375_3, 531_1)

6.6m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 21 ft.

1.20) Profile/Beam - 2015/78 from h11448 / 1021_reson8101_hvf / 2005-113 / 204_2155

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 39' 46.407" N, 132° 55' 46.154" W
Least Depth:	6.62 m
Timestamp:	2005-113.21:57:34.734 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 204_2155
Profile/Beam:	2015/78
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

21.73 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 3ft (17375_3, 531_1)

6.6m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.21) Profile/Beam - 837/28 from h11448 / 1021_reson8101_hvf / 2005-113 / 176_2115

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 40' 10.107" N, 132° 56' 03.867" W
Least Depth:	6.62 m
Timestamp:	2005-113.21:16:02.633 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 176_2115
Profile/Beam:	837/28
Charts Affected:	17375_1, 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

21.73 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 3ft (17375_1, 17375_3, 531_1)

6.6m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 2:found by side scan sonar

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.22) Profile/Beam - 535/10 from h11448 / 1021_reson8101_hvf / 2005-113 / 367_1759

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 37' 31.082" N, 132° 57' 26.737" W
Least Depth:	6.64 m
Timestamp:	2005-113.17:59:56.546 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 367_1759
Profile/Beam:	535/10
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

21.77 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 4ft (17375_3, 531_1)

6.6m (500_1, 50_1)

S-57 Data

[None]

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.23) Profile/Beam - 1214/50 from h11448 / 1021_reson8101_hvf / 2005-113 / 188_2143

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 39' 55.502" N, 132° 55' 51.373" W
Least Depth:	6.64 m
Timestamp:	2005-113.21:45:23.005 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 188_2143
Profile/Beam:	1214/50
Charts Affected:	17375_1, 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

21.78 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 4ft (17375_1, 17375_3, 531_1)

6.6m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.24) Profile/Beam - 1691/34 from h11448 / 1021_reson8101_hvf / 2005-113 / 308_1921

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 38' 15.613" N, 132° 56' 08.453" W
Least Depth:	6.66 m
Timestamp:	2005-113.19:23:30.379 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 308_1921
Profile/Beam:	1691/34
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

21.85 ft sounding in charted (17375) 23.5 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 4ft (17375_3, 531_1)

6.6m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 21 ft.

1.25) Profile/Beam - 1062/60 from h11448 / 1021_reson8101_hvf / 2005-113 / 202_2158

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 39' 39.348" N, 132° 55' 45.303" W
Least Depth:	6.72 m
Timestamp:	2005-113.21:59:52.782 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 202_2158
Profile/Beam:	1062/60
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

22.05 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 4ft (17375_3, 531_1)

6.7m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.26) Profile/Beam - 227/50 from h11448 / 1021_reson8101_hvf / 2005-113 / 220_2258

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 39' 03.939" N, 132° 55' 16.003" W
Least Depth:	6.73 m
Timestamp:	2005-113.22:59:01.908 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 220_2258
Profile/Beam:	227/50
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

22.09 sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 4ft (17375_3, 531_1)

6.7m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.27) Profile/Beam - 3917/86 from h11448 / 1021_reson8101_hvf / 2005-113 / 355_1754

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 37' 39.085" N, 132° 57' 17.081" W
Least Depth:	6.78 m
Timestamp:	2005-113.17:58:16.807 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 355_1754
Profile/Beam:	3917/86
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

22.23 ft sounding in charted (17375) 23 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ¾fm (17360_1, 16016_1, 530_1)

3fm 4ft (17375_3, 531_1)

6.8m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.28) Profile/Beam - 1506/85 from h11448 / 1021_reson8101_hvf / 2005-113 / 357_1741

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 37' 48.199" N, 132° 57' 00.638" W
Least Depth:	6.80 m
Timestamp:	2005-113.17:42:50.380 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 357_1741
Profile/Beam:	1506/85
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

22.32 ft sounding in charted (17375) 23.5 ft sounding

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ¾fm (17360_1, 16016_1, 530_1)

3fm 4ft (17375_3, 531_1)

6.8m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.29) Profile/Beam - 1052/40 from h11448 / 1021_reson8101_hvf / 2005-113 / 355_1754

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 37' 50.792" N, 132° 56' 59.367" W
Least Depth:	6.81 m
Timestamp:	2005-113.17:55:17.648 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 355_1754
Profile/Beam:	1052/40
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

22.36 ft sounding in charted (17375) 23.5 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ¾fm (17360_1, 16016_1, 530_1)

3fm 4ft (17375_3, 531_1)

6.8m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 20 ft.

1.30) Profile/Beam - 1149/69 from h11448 / 1021_reson8101_hvf / 2005-113 / 261_1940

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 38' 32.499" N, 132° 55' 33.370" W
Least Depth:	6.91 m
Timestamp:	2005-113.19:41:32.374 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 261_1940
Profile/Beam:	1149/69
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

22.68 sounding in charted (17375) 23.5 ft channel

Hydrographer Recommendations

Shoal sounding should be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ¾fm (17360_1, 16016_1, 530_1)

3fm 4ft (17375_3, 531_1)

6.9m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 21 ft.

1.31) Profile/Beam - 2338/36 from h11448 / 1021_reson8101_hvf / 2005-113 / 261_1940

DANGER TO NAVIGATION

Survey Summary

Survey Position:	56° 38' 26.957" N, 132° 55' 42.492" W
Least Depth:	6.94 m
Timestamp:	2005-113.19:42:54.733 (04/23/2005)
Survey Line:	h11448 / 1021_reson8101_hvf / 2005-113 / 261_1940
Profile/Beam:	2338/36
Charts Affected:	17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

22.77 ft sounding in charted (17375) 23.5 ft channel

Hydrographer Recommendations

Shoal sounding chould be charted.

Cartographically-Rounded Depth (Affected Charts):

3 ¾fm (17360_1, 16016_1, 530_1)

3fm 5ft (17375_3, 531_1)

6.9m (500_1, 50_1)

S-57 Data

Geo object 1:	Sounding (SOUNDG)
Attributes:	QUASOU - 1:depth known
	TECSOU - 3:found by multi-beam

Office Notes

Do not concur. Do not chart sounding, most current chart edition (02/08) shows the channel depth to be 21 ft.

H11448 AWOIS Features Report

Registry Number: H11448

State: AK

Locality: Wrangell Narrows

Sub-locality: Point Humbug to 1.3 NM North of Green Point

Project Number: OPR-O325-RA-05

Survey Dates: 04/27/2005 - 06/21/2005

Charts Affected

Number	Version	Date	Scale
17375	21st Ed.	04/01/2004	1:20000
17360	33rd Ed.	05/01/2003	1:217828
16016	20th Ed.	11/01/2003	1:969756
531	22nd Ed.	03/01/2004	1:2100000
500	8th Ed.	06/01/2003	1:3500000
530	30th Ed.	03/23/2002	1:4860700
50	6th Ed.	06/01/2003	1:10000000

Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	GP	[None]	56° 42' 46.043" N	132° 57' 04.805" W	53199
1.2	GP	[None]	56° 40' 06.336" N	132° 55' 51.504" W	53223
1.3	GP	[None]	56° 41' 27.702" N	132° 56' 58.524" W	53198
1.4	Sounding	0.92 m	56° 38' 32.788" N	132° 55' 20.370" W	53207
1.5	Sounding	3.05 m	56° 39' 28.518" N	132° 55' 47.362" W	53206

1 - DR_AWOIS

1.1) GP No. - 1 from ChartGPs - Digitized

Primary Feature for AWOIS Item #53199

Search Position: 56° 42' 46.000" N, 132° 57' 05.000" W

Historical Depth: [None]

Search Radius: 50

Search Technique: MB

Technique Notes: [None]

History Notes:

BP 46359, 1949; Reports the establishment of USACE disposal areas in Wrangell Narrows. The approximate charted center is Lat. 56/42/46 N., Lon. 132/57/05 W. (NAD83) The bounding coordinates are as follows: Lat. 56/42/55 N., Lon. 132/57/01 W. Lat. 56/42/55 N., Lon. 132/57/09 W. Lat. 56/42/37 N., Lon. 132/57/09 W. Lat. 56/42/37 N., Lon. 132/57/01 W. Depths on chart are from H09795 1978.

Survey Summary

Survey Position: 56° 42' 46.043" N, 132° 57' 04.805" W

Least Depth: [None]

Timestamp: 2005-172.16:21:10 (06/21/2005)

GP Dataset: ChartGPs - Digitized

GP No.: 1

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

AWOIS #53199

100% SWMB was achieved in the disposal area. The bottom throughout the entire area is featureless with no sign of dredge spoils. The strong currents of Wrangle Narrows appear to scour out this region in a north-south running depression.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	1	0.00	000.0	Primary
H11448_AWOIS	AWOIS # 53199	3.54	067.9	Secondary (grouped)

Hydrographer Recommendations

RETAIN AS CHARTED

Office Notes

Concur.

Feature Images

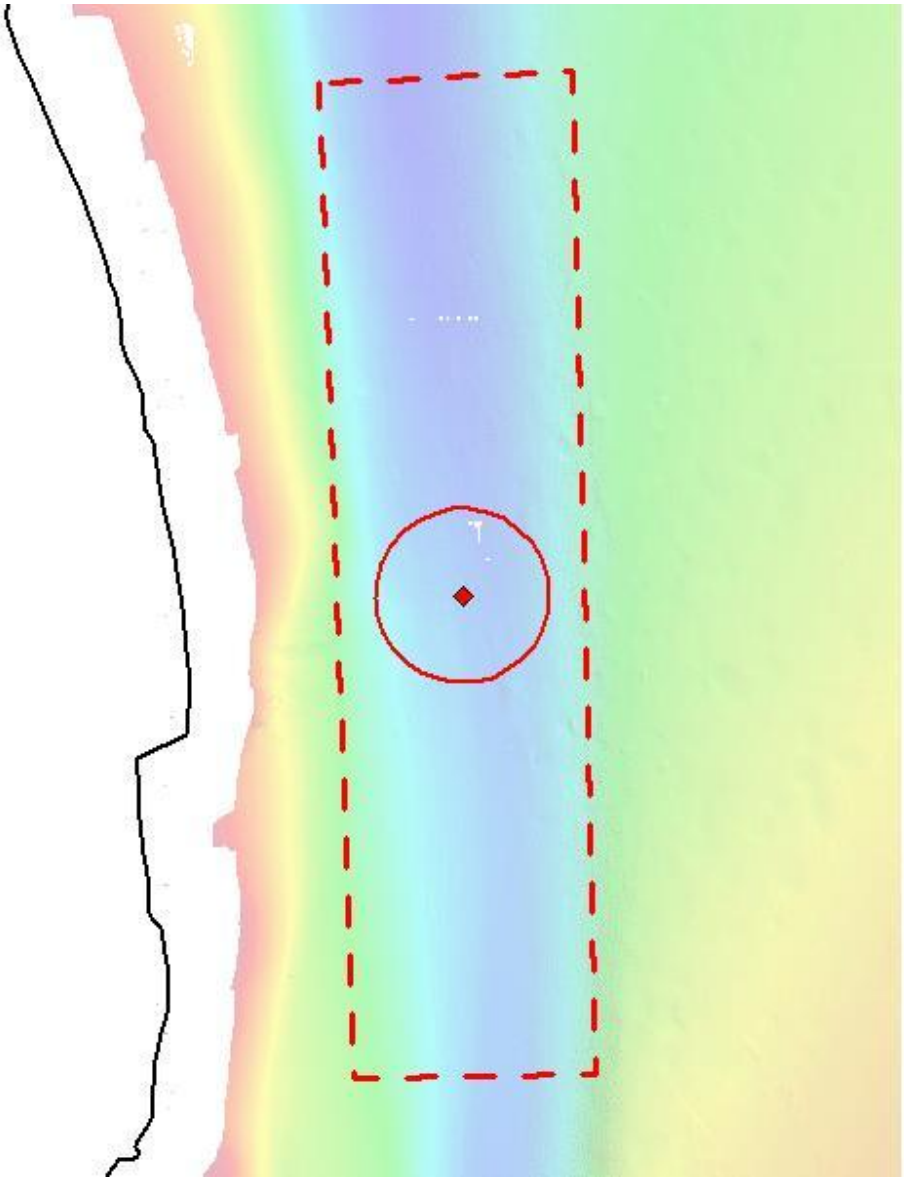


Figure 1.1.1

1.2) GP No. - 5 from GP_1103_117.tgt

Primary Feature for AWOIS Item #53223

Search Position: 56° 40' 06.820" N, 132° 55' 51.920" W

Historical Depth: [None]

Search Radius: 25

Search Technique: VS, MB, DI

Technique Notes: [None]

History Notes:

H09795, 1978; Reports a submerged dolphin in Lat. 56/40/08.1 N., Lon. 132/55/45.73 W. (Nad27)

Survey Summary

Survey Position: 56° 40' 06.336" N, 132° 55' 51.504" W

Least Depth: [None]

Timestamp: 2005-117.18:19:28.000 (04/27/2005)

GP Dataset: GP_1103_117.tgt

GP No.: 5

Charts Affected: 17375_1, 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

AWOIS 53223 DISPROVAL

A 5 min VBES search was conducted using a star pattern search. Average depth was 4 m but the bottom was never in sight during the search.

In addition, 100% SWMB was achieved over the charted position of the submerged pile but nothing was seen. SSS imagery s showed only a sloping bottom with cobbles or small rocks present. Additional SWMB development lines also failed to reveal a submerged pile.

Feature Correlation

Address	Feature	Range	Azimuth	Status
GP_1103_117.tgt	5	0.00	000.0	Primary
H11448_AWOIS	AWOIS # 53223	16.52	154.9	Secondary

Hydrographer Recommendations

Remove submerged pile from chart.

Office Notes

Concur. Remove "subm pile"

Feature Images

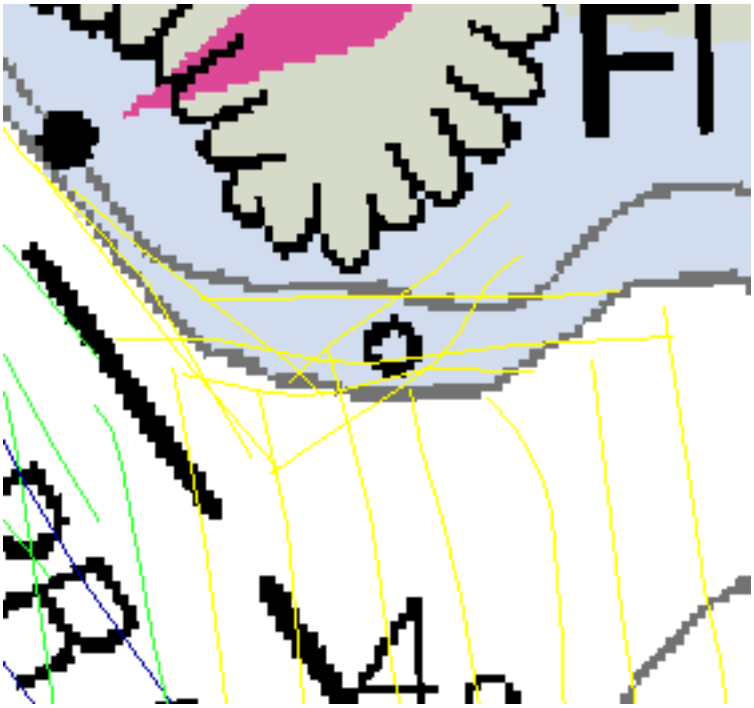


Figure 1.2.1

1.3) GP No. - 8 from GP_1103_117.tgt

Primary Feature for AWOIS Item #53198

Search Position: 56° 41' 27.730" N, 132° 56' 57.790" W

Historical Depth: [None]

Search Radius: 20

Search Technique: MB, S4, VS, DI

Technique Notes: [None]

History Notes:

H09795, 1978; The smooth sheet for this survey depicts a submerged dolphin in Lat. 56/41/29 N., Lon.132/56/51.6 W. (NAD27)

Survey Summary

Survey Position: 56° 41' 27.702" N, 132° 56' 58.524" W

Least Depth: [None]

Timestamp: 2005-117.19:08:17.000 (04/27/2005)

GP Dataset: GP_1103_117.tgt

GP No.: 8

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

AWOIS #53198 DISPROVAL

A single line of Klein 3000 SSS failed to reveal any sign of the charted submerged dolphin. Only the buoy block for R "46" was seen in an otherwise nearly featureless bottom. Some slightly hummocky terrain was observed immediately adjacent to the buoy block.

In addition, 100% SWMB was achieved over the charted position of the submerged pile but nothing was seen. SSS imagery showed only a sloping bottom and the buoy block. Additional SWMB development lines also failed to reveal a submerged pile.

Feature Correlation

Address	Feature	Range	Azimuth	Status
GP_1103_117.tgt	8	0.00	000.0	Primary
H11448_AWOIS	AWOIS # 53198	12.39	266.0	Secondary

Hydrographer Recommendations

Remove submerged dolphin from chart.

Office Notes

Concur, remove "Subm dol"

Feature Images

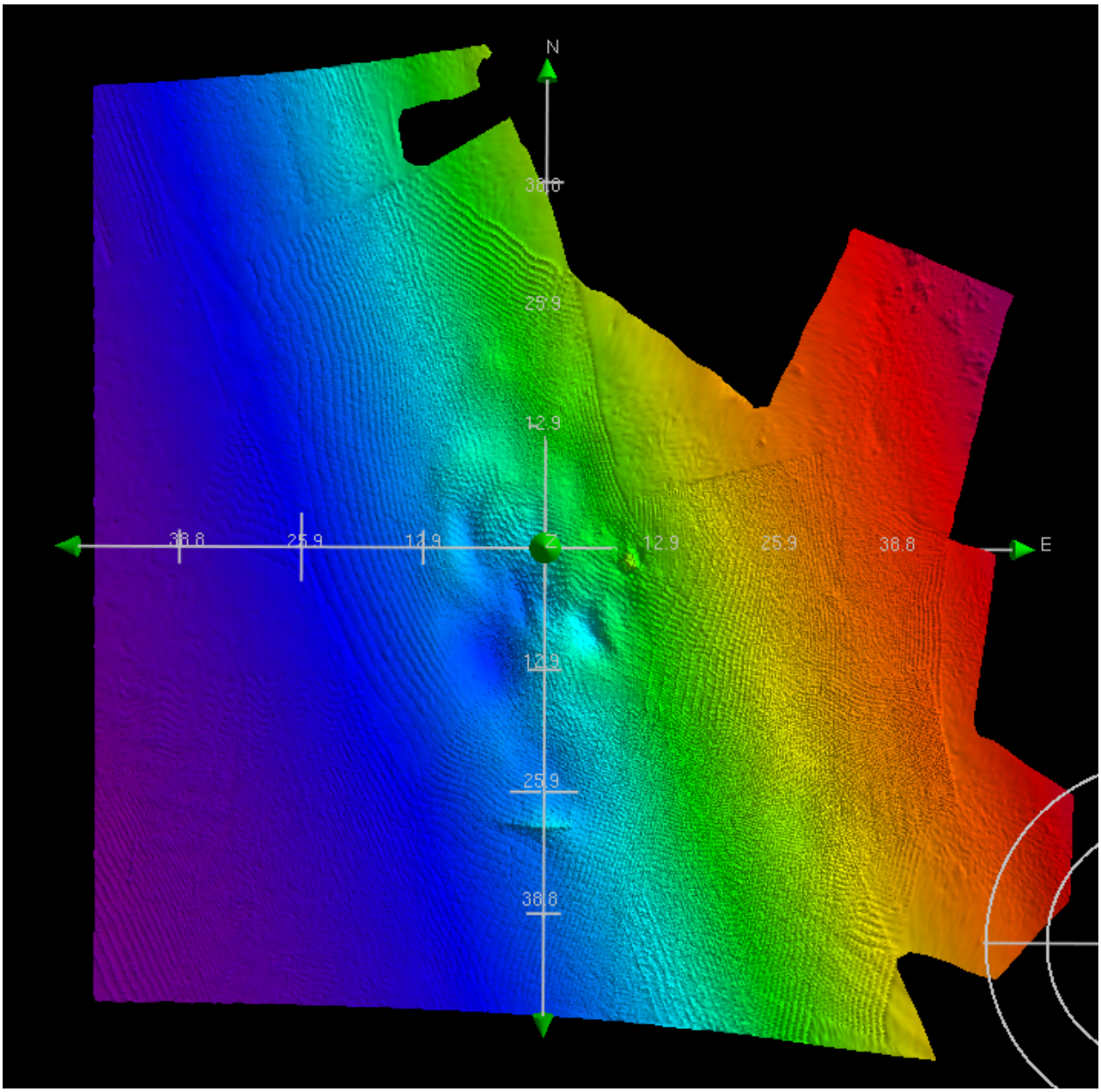


Figure 1.3.1

1.4) Profile/Beam - 2/1 from h11448 / 1103_nonechosounder_dp / 2005-117 / dp_1103_117

Primary Feature for AWOIS Item #53207

Search Position: 56° 38' 34.000" N, 132° 55' 22.000" W

Historical Depth: [None]

Search Radius: 50

Search Technique: VS, MB, DI

Technique Notes: [None]

History Notes:

LNM 45/80, 17th CGD, Reports a hazard to navigation reported to exist in an area appproximately 25 yards east to southeast of Blind Point Range Front Light 24 Lat. 56/38/34 N., Lon. 132/55/22 W.(Nad83). The hazard is reported covered by approximately 6.5 feet of water at Mean Lower Low Water.

Survey Summary

Survey Position: 56° 38' 32.788" N, 132° 55' 20.370" W

Least Depth: 0.92 m

Timestamp: 2005-117.17:33:46.000 (04/27/2005)

DP Dataset: h11448 / 1103_nonechosounder_dp / 2005-117 / dp_1103_117

Profile/Beam: 2/1

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

AWOIS #53207

Summary: The shoal sounding was verified with DP 1103-117-2765, a submerged rock that covers 0.92 meters (0.5 fathoms). This rock is 45 meters southeast of the reported position and lies near the edge of mudflats to the east.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1103_nonechosounder_dp/2005-117/dp_1103_117	2/1	0.00	000.0	Primary
H11448_AWOIS	AWOIS # 53207	46.45	143.8	Secondary

Hydrographer Recommendations

Remove reported obstruction from chart, add rock at surveyed position.

Cartographically-Rounded Depth (Affected Charts):

0 ½fm (17360_1, 16016_1, 530_1)

0fm 3ft (17375_3, 531_1)

.9m (500_1, 50_1)

Office Notes

Concur.

1.5) Profile/Beam - 211/80 from h11448 / 1006_reson8101_hvf / 2005-138 / 052_1903

Primary Feature for AWOIS Item #53206

Search Position: 56° 39' 28.110" N, 132° 55' 48.170" W

Historical Depth: [None]

Search Radius: 20

Search Technique: MB, VS, S2, DI

Technique Notes: [None]

History Notes:

H09795, 1978; The smooth sheet for this survey retained the Submerged Pile from H06825, 1943 in Lat. 56/39/29.39 N., Lon. 132/55/41.83 W.(NAD27)

Survey Summary

Survey Position: 56° 39' 28.518" N, 132° 55' 47.362" W

Least Depth: 3.05 m

Timestamp: 2005-138.19:04:01.603 (05/18/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-138 / 052_1903

Profile/Beam: 211/80

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

AWOIS #53206 verified

100% SWMB was achieved within the AWOIS search radius and an obstruction extending ~0.5 meters off the seafloor was discovered. This contact, most probably the submerged pile, is located 18 meters northeast of its charted location. The pile has a corrected depth of 3.05 meters (1.67 fathoms).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-138/052_1903	211/80	0.00	000.0	Primary
H11448_AWOIS	AWOIS # 53206	18.55	047.2	Secondary

Hydrographer Recommendations

Remove submerged pile at AWOIS position. Chart subumerged pile at surveyed position.

Cartographically-Rounded Depth (Affected Charts):

1 ½fm (17360_1, 16016_1, 530_1)

1fm 4ft (17375_3, 531_1)

3.0m (500_1, 50_1)

Office Notes

Remove "Subm pile" from chart. Chart surveyed subm pile as an obstruction.

Feature Images

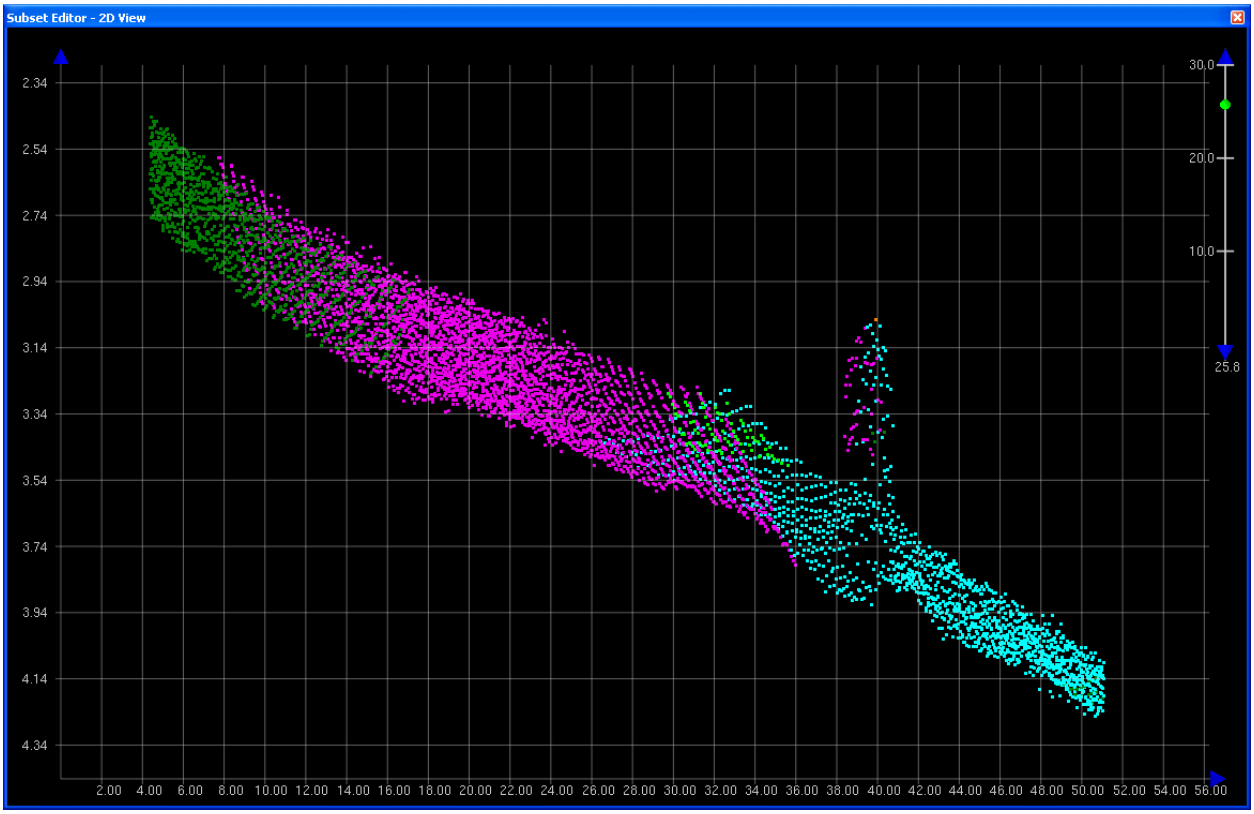


Figure 1.5.1

H11448 Features Report

Registry Number: H11448

State: AK

Locality: Wrangell Narrows

Sub-locality: Point Humbug to 1.3 NM North of Green Point

Project Number: OPR-O325-RA-05

Survey Dates: 10/27/37 - 06/13/2006

Note: Features report contains all features with the exception of DTONs and AWOIS Items.

Charts Affected

Number	Version	Date	Scale
17375	21st Ed.	04/01/2004	1:20000
17360	33rd Ed.	05/01/2003	1:217828
16016	20th Ed.	11/01/2003	1:969756
531	22nd Ed.	03/01/2004	1:2100000
500	8th Ed.	06/01/2003	1:3500000
530	30th Ed.	03/23/2002	1:4860700
50	6th Ed.	06/01/2003	1:10000000

Features

No.	Feature Type	Survey Depth	Survey Latitude	Survey Longitude
1.1	GP	[None]	56° 38' 15.210" N	132° 55' 45.864" W
1.2	Sounding	4.74 m	56° 38' 10.311" N	132° 55' 46.498" W
1.3	Sounding	-1.61 m	56° 36' 53.726" N	132° 58' 35.253" W
1.4	GP	[None]	56° 38' 26.568" N	132° 56' 04.289" W
1.5	GP	[None]	56° 36' 52.128" N	132° 57' 56.808" W
1.6	GP	[None]	56° 39' 58.860" N	132° 55' 46.272" W
1.7	GP	[None]	56° 39' 58.434" N	132° 55' 41.322" W
1.8	Sounding	-4.34 m	56° 40' 24.103" N	132° 56' 09.025" W
1.9	Sounding	-4.41 m	56° 40' 23.590" N	132° 56' 05.031" W
1.10	GP	[None]	56° 42' 45.641" N	132° 57' 12.032" W
1.11	GP	[None]	56° 40' 41.704" N	132° 56' 04.343" W

1.12	GP	[None]	56° 40' 44.307" N	132° 56' 04.349" W
2.1	GP	[None]	56° 36' 57.752" N	132° 58' 24.147" W
2.2	GP	[None]	56° 36' 59.374" N	132° 58' 23.036" W
2.3	GP	[None]	56° 36' 59.151" N	132° 58' 23.478" W
2.4	Sounding	-1.96 m	56° 39' 46.696" N	132° 55' 56.138" W
2.5	GP	[None]	56° 36' 52.368" N	132° 58' 40.759" W
2.6	Sounding	-1.41 m	56° 40' 42.730" N	132° 56' 35.249" W
2.7	Sounding	0.38 m	56° 39' 19.239" N	132° 55' 33.406" W
2.8	GP	[None]	56° 38' 13.194" N	132° 55' 45.906" W
2.9	GP	[None]	56° 42' 40.884" N	132° 56' 45.822" W
2.10	GP	[None]	56° 42' 11.274" N	132° 56' 49.188" W
2.11	GP	[None]	56° 40' 48.318" N	132° 56' 07.716" W
2.12	GP	[None]	56° 39' 44.988" N	132° 55' 39.408" W
2.13	GP	[None]	56° 38' 08.406" N	132° 55' 50.790" W
2.14	GP	[None]	56° 37' 32.274" N	132° 57' 14.718" W
2.15	GP	[None]	56° 36' 46.152" N	132° 58' 37.050" W
2.16	Rock	0.41 m	56° 38' 32.745" N	132° 55' 18.723" W
2.17	Sounding	-4.94 m	56° 42' 54.452" N	132° 56' 29.320" W
2.18	GP	[None]	56° 42' 46.386" N	132° 57' 11.562" W
2.19	Sounding	7.36 m	56° 42' 40.200" N	132° 56' 44.920" W
2.20	Sounding	5.93 m	56° 42' 33.909" N	132° 56' 45.618" W
2.21	Sounding	8.30 m	56° 42' 42.720" N	132° 56' 45.630" W
2.22	Sounding	4.48 m	56° 37' 39.217" N	132° 57' 08.724" W
2.23	Sounding	2.85 m	56° 37' 20.454" N	132° 57' 34.041" W
2.24	Sounding	4.97 m	56° 36' 48.423" N	132° 58' 04.464" W
2.25	Sounding	4.45 m	56° 37' 31.234" N	132° 57' 31.529" W
2.26	Sounding	1.74 m	56° 37' 29.726" N	132° 57' 34.223" W
2.27	Sounding	8.03 m	56° 38' 29.824" N	132° 55' 54.564" W
2.28	Sounding	2.97 m	56° 38' 01.726" N	132° 56' 43.098" W
2.29	Sounding	3.00 m	56° 38' 00.674" N	132° 56' 45.908" W
2.30	Sounding	2.98 m	56° 40' 38.357" N	132° 56' 09.736" W
2.31	Sounding	2.14 m	56° 39' 16.903" N	132° 55' 18.024" W
2.32	Sounding	3.59 m	56° 39' 52.591" N	132° 55' 52.989" W
2.33	Sounding	3.74 m	56° 39' 06.989" N	132° 55' 21.555" W
2.34	Sounding	5.42 m	56° 39' 08.000" N	132° 55' 13.160" W
2.35	Sounding	6.60 m	56° 39' 08.352" N	132° 55' 18.632" W

2.36	Sounding	4.85 m	56° 39' 28.224" N	132° 55' 40.828" W
2.37	Sounding	5.61 m	56° 39' 26.546" N	132° 55' 33.109" W
2.38	Sounding	2.36 m	56° 41' 31.588" N	132° 57' 07.992" W
2.39	Sounding	5.86 m	56° 38' 16.510" N	132° 56' 00.241" W
2.40	Sounding	5.94 m	56° 38' 01.514" N	132° 56' 36.675" W
2.41	Sounding	6.81 m	56° 37' 50.792" N	132° 56' 59.367" W
2.42	Sounding	5.24 m	56° 37' 49.471" N	132° 56' 57.234" W
2.43	Sounding	6.00 m	56° 37' 21.878" N	132° 57' 38.031" W
2.44	Sounding	6.42 m	56° 37' 20.775" N	132° 57' 38.406" W
2.45	Sounding	14.44 m	56° 43' 02.480" N	132° 56' 43.359" W
2.46	Sounding	3.39 m	56° 38' 49.274" N	132° 55' 20.669" W
2.47	Sounding	9.22 m	56° 40' 46.487" N	132° 56' 11.373" W
2.48	Sounding	7.66 m	56° 40' 42.770" N	132° 56' 11.833" W
2.49	Sounding	8.51 m	56° 40' 01.575" N	132° 55' 47.770" W
2.50	Sounding	5.37 m	56° 38' 55.896" N	132° 55' 10.043" W
2.51	Sounding	2.11 m	56° 39' 20.447" N	132° 55' 24.399" W
2.52	Sounding	4.53 m	56° 39' 07.831" N	132° 55' 06.904" W
2.53	Sounding	5.25 m	56° 39' 13.394" N	132° 55' 16.873" W

1 - Charted Features

1.1) GP No. - 2 from GP_1103_117.tgt

Survey Summary

Survey Position: 56° 38' 15.210" N, 132° 55' 45.864" W

Least Depth: [None]

Timestamp: 2005-117.17:19:14.000 (04/27/2005)

GP Dataset: GP_1103_117.tgt

GP No.: 2

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Platform mooring bouy

This shackel topped bouy (~ 15cm wide) is at the position of the charted platform. The platform is at best seasonal; a ruined platform is washed up on the beach ~130 to the south-southeast.

Feature Correlation

Address	Feature	Range	Azimuth	Status
GP_1103_117.tgt	2	0.00	000.0	Primary
ChartGPs - Digitized	2	126.66	346.8	Secondary (grouped)

Hydrographer Recommendations

Remove charted platform, do not chart mooring buoy.

Office Notes

Remove platform. Chart surveyed feature as Obstn per HCell.

Feature Images

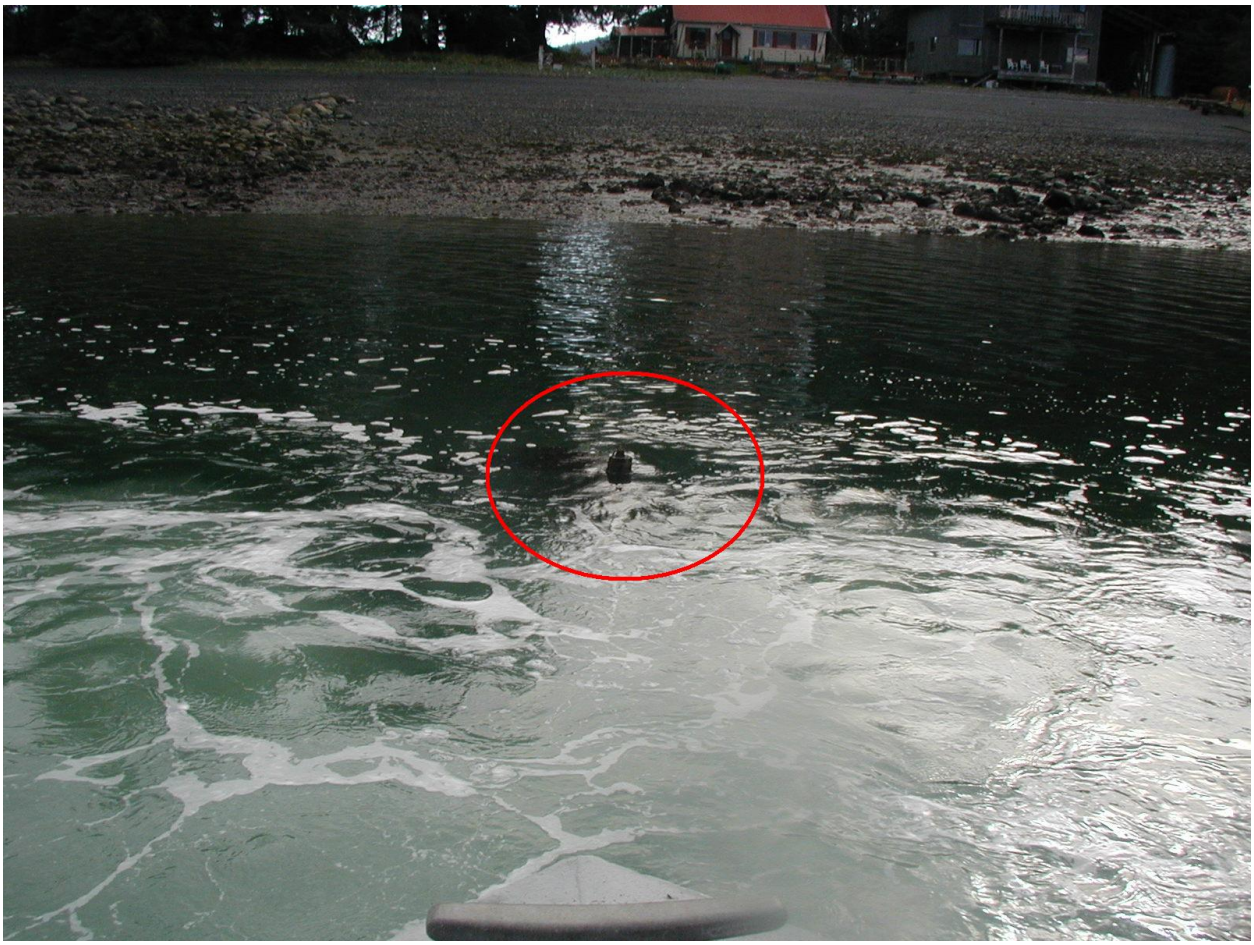


Figure 1.1.1 Mooring Buoy

Figure 1.1.2 Platform ashore ~130m SSE

1.2) Profile/Beam - 1/1 from h11448 / 817_nonechosounder_dp / 2005-112 / pilpnt_112.shp

Survey Summary

Survey Position: 56° 38' 10.311" N, 132° 55' 46.498" W

Least Depth: 4.74 m

Timestamp: 2005-112.18:19:32.000 (04/22/2005)

DP Dataset: h11448 / 817_nonechosounder_dp / 2005-112 / pilpnt_112.shp

Profile/Beam: 1/1

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Pile verified

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/817_nonechosounder_dp/2005-112/pilpnt_112.shp	1/1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

2 ½fm (17360_1, 16016_1, 530_1)

2fm 3ft (17375_3, 531_1)

4.7m (500_1, 50_1)

Office Notes

retain pile as charted

1.3) Profile/Beam - 1/1 from h11448 / 817_nonechosounder_dp / 2005-114 / uwtroc_114.shp

Survey Summary

Survey Position: 56° 36' 53.726" N, 132° 58' 35.253" W

Least Depth: -1.61 m

Timestamp: 2005-114.17:00:11.000 (04/24/2005)

DP Dataset: h11448 / 817_nonechosounder_dp / 2005-114 / uwtroc_114.shp

Profile/Beam: 1/1

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Charted T sheet reef verified

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/817_nonechosounder_dp/2005-114/uwtroc_114.shp	1/1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

0 ¾fm (17360_1, 16016_1, 530_1)

0fm 5ft (17375_3, 531_1)

-1.6m (500_1, 50_1)

Office Notes

Chart high point on reef

1.4) GP No. - 3 from ChartGPs - Digitized

Survey Summary

Survey Position: 56° 38' 26.568" N, 132° 56' 04.289" W

Least Depth: [None]

Timestamp: 2006-164.19:26:56 (06/13/2006)

GP Dataset: ChartGPs - Digitized

GP No.: 3

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Charted submerged pile disproval

100% SWMB was achieved over the position of the charted submerged pile but nothing was seen. The bottom is smooth and featureless with a downward slope east towards the main channel. Bottom depth within the danger line surrounding the pile ranges between 6.4 and 8.8 meters. SSS imagery also showed no pile, only a sloping, featureless bottom.

Feature Correlation

Address	Feature	Range	Azimuth	Status
ChartGPs - Digitized	3	0.00	000.0	Primary

Hydrographer Recommendations

Remove Submerged Pile from chart.

Office Notes

Concur, remove subm pile from chart.

Feature Images

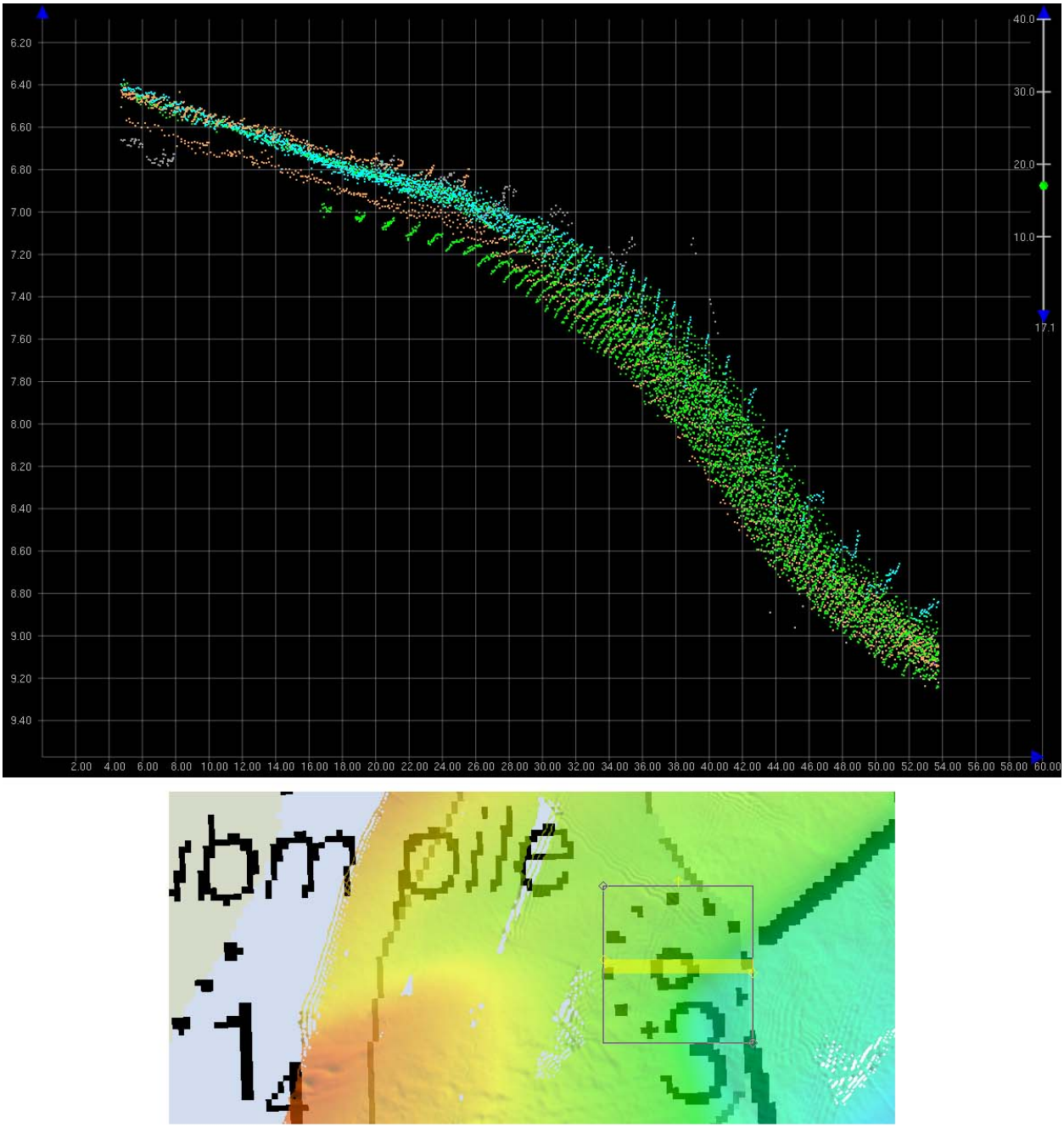


Figure 1.4.1

1.5) GP No. - 1 from GP_1103_117.tgt

Survey Summary

Survey Position: 56° 36' 52.128" N, 132° 57' 56.808" W

Least Depth: [None]

Timestamp: 2005-117.16:31:59.000 (04/27/2005)

GP Dataset: GP_1103_117.tgt

GP No.: 1

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

CHD Pile Disproval

100% SWMB was achieved over the charted position of the sumb pile but nothing was seen. SSS showed only a sloping, featureless bottom.

Feature Correlation

Address	Feature	Range	Azimuth	Status
GP_1103_117.tgt	1	0.00	000.0	Primary

Hydrographer Recommendations

Remove submerged pile from chart.

Office Notes

Concur.

1.6) GP No. - 6 from GP_1103_117.tgt

Survey Summary

Survey Position: 56° 39' 58.860" N, 132° 55' 46.272" W

Least Depth: [None]

Timestamp: 2005-117.18:33:28.000 (04/27/2005)

GP Dataset: GP_1103_117.tgt

GP No.: 6

Charts Affected: 17375_1, 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

CHD RK DISPROVAL

A 5 min VBES search was conducted using a star pattern search. Average depth was 7 m but the bottom was never in sight during the search.

In addition, 100% SWMB was achieved over the position of the charted rock but nothing was seen. Unfortunately, due to the perceived risk, no lines were run directly over the charted rock and thus no nadir beams were collected directly over the charted position. Soundings beyond the standard 60 degrees off nadir from adjacent lines were re-accepted to achieve total bottom coverage. SSS imagery showed no rocks, only a sloping, featureless bottom.

Feature Correlation

Address	Feature	Range	Azimuth	Status
GP_1103_117.tgt	6	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted rock awash.

Office Notes

Concur, remove rock.

Feature Images

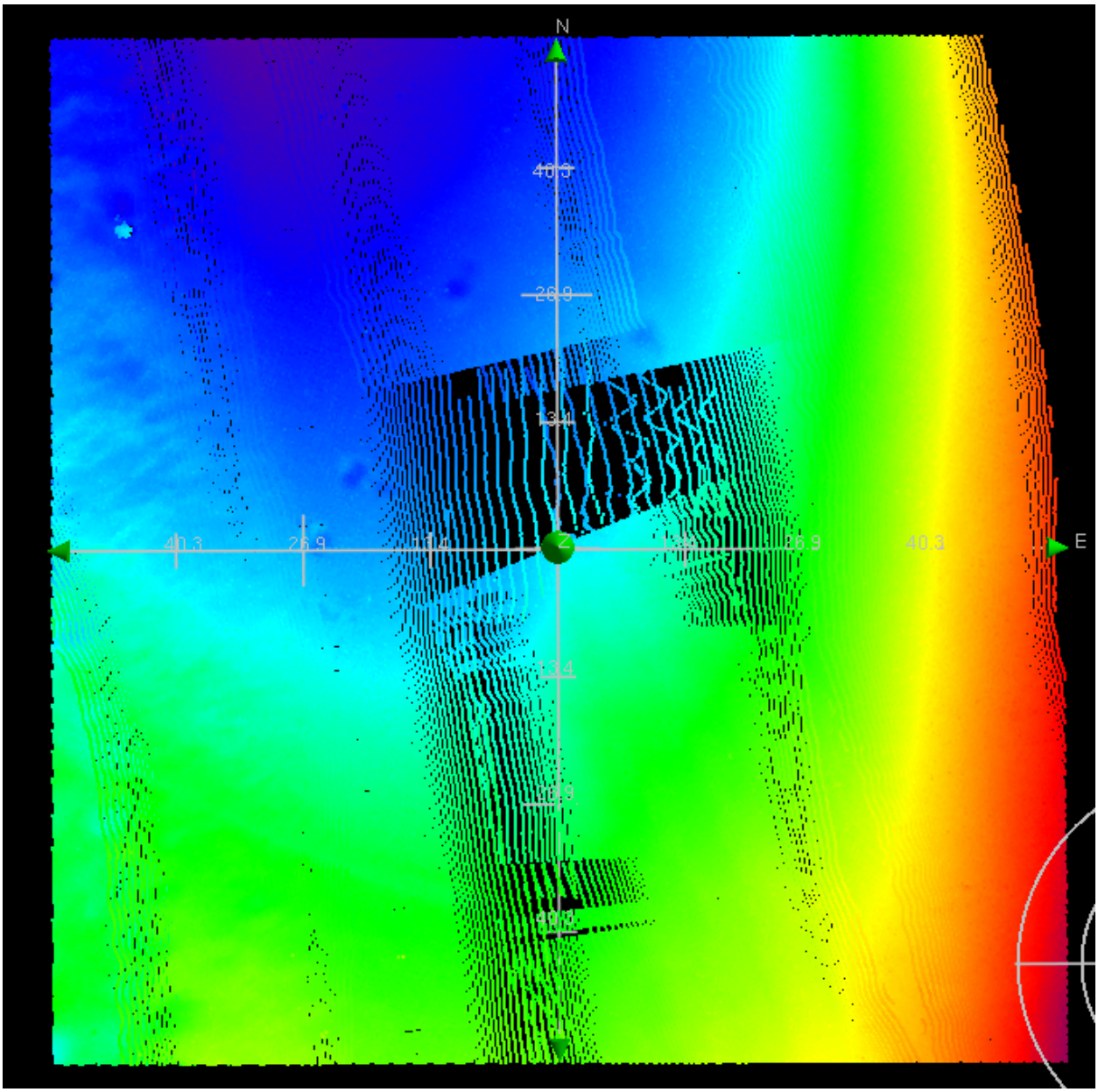


Figure 1.6.1

1.7) GP No. - 7 from GP_1103_117.tgt

Survey Summary

Survey Position: 56° 39' 58.434" N, 132° 55' 41.322" W

Least Depth: [None]

Timestamp: 2005-117.18:39:12.000 (04/27/2005)

GP Dataset: GP_1103_117.tgt

GP No.: 7

Charts Affected: 17375_1, 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

CHD RK DISPROVAL

DP was taken ~30 meters for the rock's charted position and ~10 meters from the water line. Only a bare sand/mud beach was seen where the rock should have been located.

Feature Correlation

Address	Feature	Range	Azimuth	Status
GP_1103_117.tgt	7	0.00	000.0	Primary

Hydrographer Recommendations

Remove charted rock awash.

Office Notes

Concur. Remove charted rock.

Feature Images

Figure 1.7.1

1.8) Profile/Beam - 1/1 from h11448 / 817_nonechosounder_dp / 2005-114 / pilpnt.shp

Survey Summary

Survey Position: 56° 40' 24.103" N, 132° 56' 09.025" W

Least Depth: -4.34 m

Timestamp: 2005-114.21:21:27.000 (04/24/2005)

DP Dataset: h11448 / 817_nonechosounder_dp / 2005-114 / pilpnt.shp

Profile/Beam: 1/1

Charts Affected: 17375_1, 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Outermost of 6 equidistant piles extending west from end of charted dock. (see feature i:/hdcs_data/h11448/817_nonechosounder_dp/2005-114/pilpnt.shp/2/1)

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/817_nonechosounder_dp/2005-114/pilpnt.shp	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Shorten charted dock to position of i:/hdcs_data/h11448/817_nonechosounder_dp/2005-114/pilpnt.shp/2/1. Add 6 equally spaced piles to position of i:/hdcs_data/h11448/817_nonechosounder_dp/2005-114/pilpnt.shp/1/1.

Cartographically-Rounded Depth (Affected Charts):

-2 ¼fm (17360_1, 16016_1, 530_1)

-2fm 2ft (17375_1, 17375_3, 531_1)

-4.4m (500_1, 50_1)

Office Notes

Concur.

1.9) Profile/Beam - 2/1 from h11448 / 817_nonechosounder_dp / 2005-114 / pilpnt.shp

Survey Summary

Survey Position: 56° 40' 23.590" N, 132° 56' 05.031" W

Least Depth: -4.41 m

Timestamp: 2005-114.21:26:57.000 (04/24/2005)

DP Dataset: h11448 / 817_nonechosounder_dp / 2005-114 / pilpnt.shp

Profile/Beam: 2/1

Charts Affected: 17375_1, 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

West end of charted dock (dock is shorter than currently charted). 6 piles extend from end of dock to DP i:/hdcs_data/h11448/817_nonechosounder_dp/2005-114/pilpnt.shp/1/1.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/817_nonechosounder_dp/2005-114/pilpnt.shp	2/1	0.00	000.0	Primary

Hydrographer Recommendations

Shorten charted dock to position of i:/hdcs_data/h11448/817_nonechosounder_dp/2005-114/pilpnt.shp/2/1. Add 6 equally spaced piles to position of i:/hdcs_data/h11448/817_nonechosounder_dp/2005-114/pilpnt.shp/1/1.

Cartographically-Rounded Depth (Affected Charts):

-2 ¼fm (17360_1, 16016_1, 530_1)

-2fm 2ft (17375_1, 17375_3, 531_1)

-4.4m (500_1, 50_1)

Office Notes

Concur.

1.10) GP No. - 2 from GenLine.shp

Survey Summary

Survey Position: 56° 42' 45.641" N, 132° 57' 12.032" W

Least Depth: [None]

Timestamp: 37-300.00:00:00.000 (10/27/0037)

GP Dataset: GenLine.shp

GP No.: 2

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Floating Dock for USFS with ramp

dock cotains a sheet pile wall inshore of dock that can be submerged at high tides

Feature Correlation

Address	Feature	Range	Azimuth	Status
GenLine.shp	2	0.00	000.0	Primary

Hydrographer Recommendations

Remove "Floating Dock PA" from chart. Add pier to chart.

Office Notes

Concur.

1.11) GP No. - 1 from GenPoint.shp

Survey Summary

Survey Position: 56° 40' 41.704" N, 132° 56' 04.343" W

Least Depth: [None]

Timestamp: [None]

GP Dataset: GenPoint.shp

GP No.: 1

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

1 of 2 remaining dolphins from disused log boom area. (No log boom or log storage operations observed at this location during survey.)

Feature Correlation

Address	Feature	Range	Azimuth	Status
GenPoint.shp	1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart surveyed dolphin. Remove charted log boom.

Feature Images

Figure 1.11.1

1.12) GP No. - 2 from GenPoint.shp

Survey Summary

Survey Position: 56° 40' 44.307" N, 132° 56' 04.349" W

Least Depth: [None]

Timestamp: [None]

GP Dataset: GenPoint.shp

GP No.: 2

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

1 of 2 remaining dolphins from disused log boom area. (No log boom or log storage operations observed at this location during survey.)

Feature Correlation

Address	Feature	Range	Azimuth	Status
GenPoint.shp	2	0.00	000.0	Primary

Hydrographer Recommendations

Retain charted dolphin. Remove charted log boom.

Office Notes

Concur with clarification. Chart surveyed dolphin. Remove charted log boom.

Feature Images

Figure 1.12.1

2 - New Features

2.1) GP No. - 1 from BOYSPP_112.shp

Survey Summary

Survey Position: 56° 36' 57.752" N, 132° 58' 24.147" W

Least Depth: [None]

Timestamp: 2005-112.16:54:25.000 (04/22/2005)

GP Dataset: BOYSPP_112.shp

GP No.: 1

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Mooring buoy Private Moring Bouy should be charted

Feature Correlation

Address	Feature	Range	Azimuth	Status
BOYSPP_112.shp	1	0.00	000.0	Primary

Hydrographer Recommendations

Chart Mooring Bouy

Office Notes

concur

Feature Images

Figure 2.1.1

2.2) GP No. - 1 from MORFAC_112.shp

Survey Summary

Survey Position: 56° 36' 59.374" N, 132° 58' 23.036" W

Least Depth: [None]

Timestamp: 2005-112.16:45:33.000 (04/22/2005)

GP Dataset: MORFAC_112.shp

GP No.: 1

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

New Dock with piles

Feature Correlation

Address	Feature	Range	Azimuth	Status
MORFAC_112.shp	1	0.00	000.0	Primary

Hydrographer Recommendations

Chart piles with dock between and pier to land.

Office Notes

Chart pontoon

Feature Images

Figure 2.2.1

2.3) GP No. - 2 from MORFAC_112.shp

Survey Summary

Survey Position: 56° 36' 59.151" N, 132° 58' 23.478" W

Least Depth: [None]

Timestamp: 2005-112.16:47:46.000 (04/22/2005)

GP Dataset: MORFAC_112.shp

GP No.: 2

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

New dock SE corner

Feature Correlation

Address	Feature	Range	Azimuth	Status
MORFAC_112.shp	2	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart pontoon

2.4) Profile/Beam - 1/1 from h11448 / 817_nonechosounder_dp / 2005-113 / pilpnt_113.shp

Survey Summary

Survey Position: 56° 39' 46.696" N, 132° 55' 56.138" W

Least Depth: -1.96 m

Timestamp: 2005-113.18:35:12.000 (04/23/2005)

DP Dataset: h11448 / 817_nonechosounder_dp / 2005-113 / pilpnt_113.shp

Profile/Beam: 1/1

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

SE most of row of 2 new piles.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/817_nonechosounder_dp/2005-113/pilpnt_113.shp	1/1	0.00	000.0	Primary

Hydrographer Recommendations

Chart seaward-most pile.

Cartographically-Rounded Depth (Affected Charts):

-1fm (17360_1, 16016_1, 530_1)

-1fm 0ft (17375_3, 531_1)

-2.0m (500_1, 50_1)

Office Notes

Concur.

Feature Images

Figure 2.4.1

2.5) GP No. - 1 from BOYSPP_114.shp

Survey Summary

Survey Position: 56° 36' 52.368" N, 132° 58' 40.759" W

Least Depth: [None]

Timestamp: 2005-114.17:04:24.000 (04/24/2005)

GP Dataset: BOYSPP_114.shp

GP No.: 1

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

New mooring bouy

private bouy ~ 1 meter dimeter with reflection tape Marks safe passage through small craft route to Beecher Pass.

Feature Correlation

Address	Feature	Range	Azimuth	Status
BOYSPP_114.shp	1	0.00	000.0	Primary

Hydrographer Recommendations

Chart private mooring buoy.

Office Notes

Concur.

Feature Images

Figure 2.5.1

2.6) Profile/Beam - 5/1 from h11448 / 817_nonechosounder_dp / 2005-116 / dp_817_117

Survey Summary

Survey Position: 56° 40' 42.730" N, 132° 56' 35.249" W

Least Depth: -1.41 m

Timestamp: 2005-116.19:58:47.000 (04/26/2005)

DP Dataset: h11448 / 817_nonechosounder_dp / 2005-116 / dp_817_117

Profile/Beam: 5/1

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

NEW OBSTRUCTION

New obstruction is a 1.5 diameter meter boat propeller embedded into the shore line half way

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/817_nonechosounder_dp/2005-116/dp_817_117	5/1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

0 ¾fm (17360_1, 16016_1, 530_1)

0fm 4ft (17375_1, 531_1)

-1.4m (500_1, 50_1)

Office Notes

Chart obstruction

Feature Images

Figure 2.6.1

2.7) Profile/Beam - 4/1 from h11448 / 817_nonechosounder_dp / 2005-116 / dp_817_117

Survey Summary

Survey Position: 56° 39' 19.239" N, 132° 55' 33.406" W

Least Depth: 0.38 m

Timestamp: 2005-116.19:15:16.000 (04/26/2005)

DP Dataset: h11448 / 817_nonechosounder_dp / 2005-116 / dp_817_117

Profile/Beam: 4/1

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

NEW RK

Rock Should Be added to chart

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/817_nonechosounder_dp/2005-116/dp_817_117	4/1	0.00	000.0	Primary

Hydrographer Recommendations

New rock should be added to chart

Cartographically-Rounded Depth (Affected Charts):

0 ¼fm (17360_1, 16016_1, 530_1)

0fm 1ft (17375_3, 531_1)

.4m (500_1, 50_1)

Office Notes

Chart rock.

Feature Images

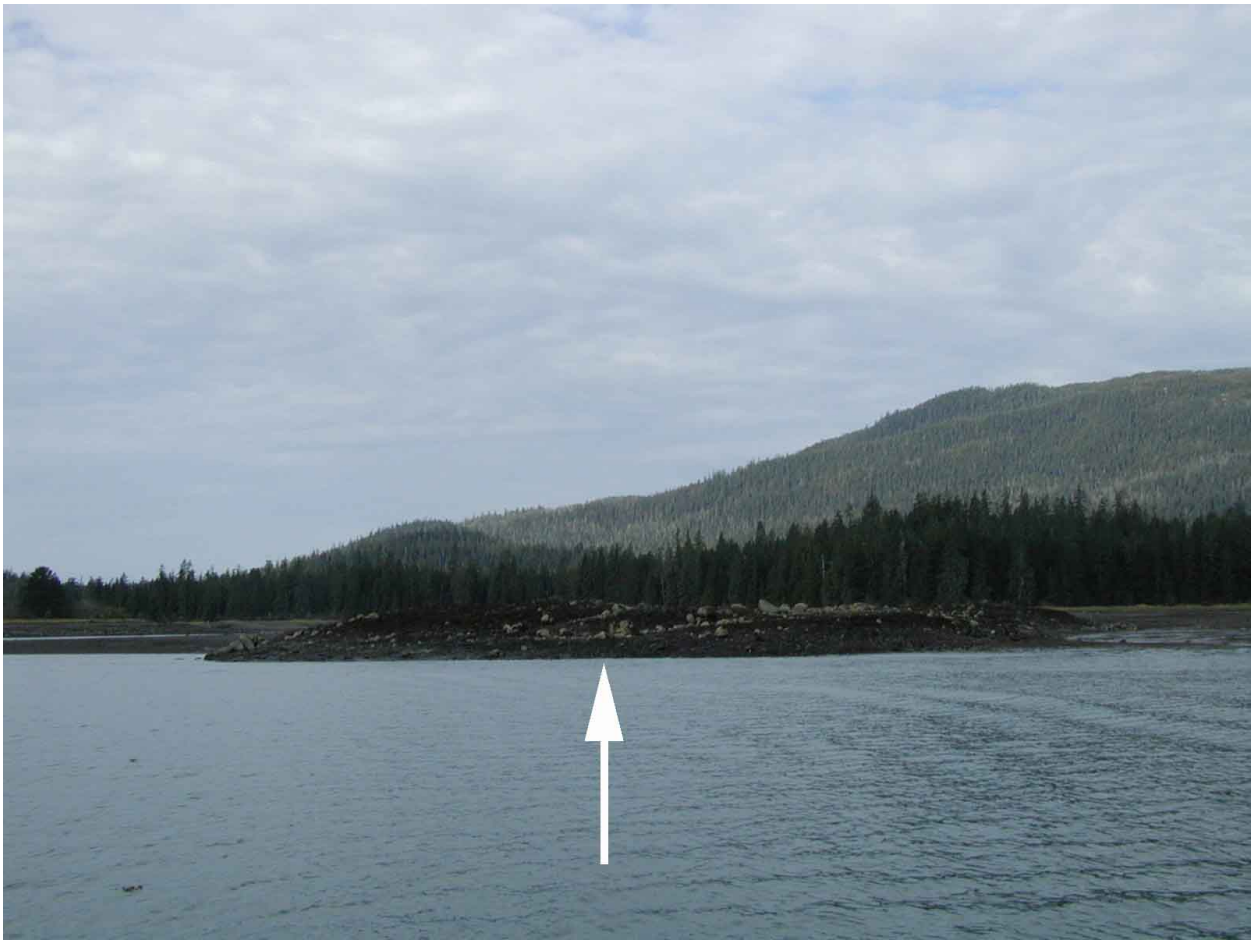


Figure 2.7.1

2.8) GP No. - 3 from GP_1103_117.tgt

Survey Summary

Survey Position: 56° 38' 13.194" N, 132° 55' 45.906" W

Least Depth: [None]

Timestamp: 2005-117.17:21:40.000 (04/27/2005)

GP Dataset: GP_1103_117.tgt

GP No.: 3

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

NEW FLOTING DOCK (may be seasonal)

Feature Correlation

Address	Feature	Range	Azimuth	Status
GP_1103_117.tgt	3	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart dock.

Feature Images

Figure 2.8.1

2.9) GP No. - 1 from 1103_140_BS.tgt

Survey Summary

Survey Position: 56° 42' 40.884" N, 132° 56' 45.822" W

Least Depth: [None]

Timestamp: 2005-140.16:22:54.000 (05/20/2005)

GP Dataset: 1103_140_BS.tgt

GP No.: 1

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

stk gy M

Feature Correlation

Address	Feature	Range	Azimuth	Status
1103_140_BS.tgt	1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

chart bottom sample

2.10) GP No. - 2 from 1103_140_BS.tgt

Survey Summary

Survey Position: 56° 42' 11.274" N, 132° 56' 49.188" W

Least Depth: [None]

Timestamp: 2005-140.16:36:40.000 (05/20/2005)

GP Dataset: 1103_140_BS.tgt

GP No.: 2

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

stk gy M

Feature Correlation

Address	Feature	Range	Azimuth	Status
1103_140_BS.tgt	2	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart bottom sample.

2.11) GP No. - 3 from 1103_140_BS.tgt

Survey Summary

Survey Position: 56° 40' 48.318" N, 132° 56' 07.716" W

Least Depth: [None]

Timestamp: 2005-140.16:51:56.000 (05/20/2005)

GP Dataset: 1103_140_BS.tgt

GP No.: 3

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

fne S

Feature Correlation

Address	Feature	Range	Azimuth	Status
1103_140_BS.tgt	3	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart bottom sample.

2.12) GP No. - 4 from 1103_140_BS.tgt

Survey Summary

Survey Position: 56° 39' 44.988" N, 132° 55' 39.408" W

Least Depth: [None]

Timestamp: 2005-140.17:06:06.000 (05/20/2005)

GP Dataset: 1103_140_BS.tgt

GP No.: 4

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

silt/ooze

Feature Correlation

Address	Feature	Range	Azimuth	Status
1103_140_BS.tgt	4	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Remove charted "P", chart surveyed bottom sample.

2.13) GP No. - 5 from 1103_140_BS.tgt

Survey Summary

Survey Position: 56° 38' 08.406" N, 132° 55' 50.790" W

Least Depth: [None]

Timestamp: 2005-140.17:17:32.000 (05/20/2005)

GP Dataset: 1103_140_BS.tgt

GP No.: 5

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

stk gy M

Feature Correlation

Address	Feature	Range	Azimuth	Status
1103_140_BS.tgt	5	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Remove charted "M", chart surveyed bottom sample.

2.14) GP No. - 6 from 1103_140_BS.tgt

Survey Summary

Survey Position: 56° 37' 32.274" N, 132° 57' 14.718" W

Least Depth: [None]

Timestamp: 2005-140.17:24:57.000 (05/20/2005)

GP Dataset: 1103_140_BS.tgt

GP No.: 6

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

P

Feature Correlation

Address	Feature	Range	Azimuth	Status
1103_140_BS.tgt	6	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

chart bottom sample

2.15) GP No. - 7 from 1103_140_BS.tgt

Survey Summary

Survey Position: 56° 36' 46.152" N, 132° 58' 37.050" W

Least Depth: [None]

Timestamp: 2005-140.17:36:40.000 (05/20/2005)

GP Dataset: 1103_140_BS.tgt

GP No.: 7

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

hrd

Feature Correlation

Address	Feature	Range	Azimuth	Status
1103_140_BS.tgt	7	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

chart bottom sample

2.16) Profile/Beam - 1/1 from h11448 / 1103_nonechosounder_dp / 2005-117 / dp_1103_117

Survey Summary

Survey Position: 56° 38' 32.745" N, 132° 55' 18.723" W

Least Depth: 0.41 m

Timestamp: 2005-117.17:33:29.000 (04/27/2005)

DP Dataset: h11448 / 1103_nonechosounder_dp / 2005-117 / dp_1103_117

Profile/Beam: 1/1

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

new rock

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1103_nonechosounder_dp/2005-117/dp_1103_117	1/1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

0 ¼fm (17360_1, 16016_1, 530_1)

0fm 1ft (17375_3, 531_1)

.4m (500_1, 50_1)

Office Notes

Chart rock.

Feature Images

Figure 2.16.1

2.17) Profile/Beam - 1/1 from h11448 / 817_nonechosounder_dp / 2005-114 / lndmrk.shp

Survey Summary

Survey Position: 56° 42' 54.452" N, 132° 56' 29.320" W

Least Depth: -4.94 m

Timestamp: 2005-114.22:32:20.000 (04/24/2005)

DP Dataset: h11448 / 817_nonechosounder_dp / 2005-114 / lndmrk.shp

Profile/Beam: 1/1

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

offshore piles for floating dock

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/817_nonechosounder_dp/2005-114/lndmrk.shp	1/1	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

-2 ¾fm (17360_1, 16016_1, 530_1)

-2fm 4ft (17375_1, 531_1)

-5.0m (500_1, 50_1)

Office Notes

chart as SLCONS pier, floating dock

2.18) GP No. - 3 from GenPoint.shp

Survey Summary

Survey Position: 56° 42' 46.386" N, 132° 57' 11.562" W

Least Depth: [None]

Timestamp: [None]

GP Dataset: GenPoint.shp

GP No.: 3

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

Northern most pile of three

Feature Correlation

Address	Feature	Range	Azimuth	Status
GenPoint.shp	3	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart piles

2.19) Profile/Beam - 319/87 from h11448 / 1006_reson8101_hvf / 2005-114 / 109_2240

Survey Summary

Survey Position: 56° 42' 40.200" N, 132° 56' 44.920" W

Least Depth: 7.36 m

Timestamp: 2005-114.22:41:08.401 (04/24/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-114 / 109_2240

Profile/Beam: 319/87

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged obstruction

extends ~1.5m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-114/109_2240	319/87	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart obstruction with least depth of 4 fathoms

2.20) Profile/Beam - 347/13 from h11448 / 1006_reson8101_hvf / 2005-114 / 468_2131

Survey Summary

Survey Position: 56° 42' 33.909" N, 132° 56' 45.618" W

Least Depth: 5.93 m

Timestamp: 2005-114.21:32:09.839 (04/24/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-114 / 468_2131

Profile/Beam: 347/13

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged obstruction

extends ~1m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-114/468_2131	347/13	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart obstruction with least depth of 3 fathoms and 1 foot.

2.21) Profile/Beam - 31/92 from h11448 / 1006_reson8101_hvf / 2005-114 / 540_2241

Survey Summary

Survey Position: 56° 42' 42.720" N, 132° 56' 45.630" W

Least Depth: 8.30 m

Timestamp: 2005-114.22:41:57.945 (04/24/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-114 / 540_2241

Profile/Beam: 31/92

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged obstruction

extends ~2m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-114/540_2241	31/92	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart obstruction with least depth of 4 fathoms and 3 feet.

2.22) Profile/Beam - 1179/91 from h11448 / 1006_reson8101_hvf / 2005-116 / 109_2352

Survey Summary

Survey Position: 56° 37' 39.217" N, 132° 57' 08.724" W

Least Depth: 4.48 m

Timestamp: 2005-116.23:53:20.974 (04/26/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-116 / 109_2352

Profile/Beam: 1179/91

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-116/109_2352	1179/91	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 2 fathoms and 3 feet.

2.23) Profile/Beam - 457/16 from h11448 / 1006_reson8101_hvf / 2005-116 / 295_2303

Survey Summary

Survey Position: 56° 37' 20.454" N, 132° 57' 34.041" W

Least Depth: 2.85 m

Timestamp: 2005-116.23:04:05.654 (04/26/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-116 / 295_2303

Profile/Beam: 457/16

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.5m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-116/295_2303	457/16	0.00	000.0	Primary
h11448/1015_k3k_hvf/2005-139/k3k_050519212700	0001	1.19	168.2	Secondary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 1 fathom and 3 feet.

2.24) Profile/Beam - 2117/17 from h11448 / 1006_reson8101_hvf / 2005-116 / 377_1810

Survey Summary

Survey Position: 56° 36' 48.423" N, 132° 58' 04.464" W

Least Depth: 4.97 m

Timestamp: 2005-116.18:13:04.815 (04/26/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-116 / 377_1810

Profile/Beam: 2117/17

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~0.7m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-116/377_1810	2117/17	0.00	000.0	Primary
h11448/1015_k3k_hvf/2005-139/k3k_050519211200	0001	1.36	207.9	Secondary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 2 fathoms and 4 feet.

2.25) Profile/Beam - 407/15 from h11448 / 1006_reson8101_hvf / 2005-116 / 382_2315

Survey Summary

Survey Position: 56° 37' 31.234" N, 132° 57' 31.529" W

Least Depth: 4.45 m

Timestamp: 2005-116.23:16:02.205 (04/26/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-116 / 382_2315

Profile/Beam: 407/15

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~0.4m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-116/382_2315	407/15	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 2 fathoms and 3 feet.

2.26) Profile/Beam - 1328/14 from h11448 / 1006_reson8101_hvf / 2005-116 / 384_2343

Survey Summary

Survey Position: 56° 37' 29.726" N, 132° 57' 34.223" W

Least Depth: 1.74 m

Timestamp: 2005-116.23:45:10.571 (04/26/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-116 / 384_2343

Profile/Beam: 1328/14

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.5m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-116/384_2343	1328/14	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 5 feet.

2.27) Profile/Beam - 213/10 from h11448 / 1006_reson8101_hvf / 2005-118 / 236_0030

Survey Summary

Survey Position: 56° 38' 29.824" N, 132° 55' 54.564" W

Least Depth: 8.03 m

Timestamp: 2005-119.00:30:41.614 (04/29/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-118 / 236_0030

Profile/Beam: 213/10

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged obstruction

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-118/236_0030	213/10	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Do not chart. Least depth of obstruction is deeper than surounding depths.

2.28) Profile/Beam - 2432/7 from h11448 / 1006_reson8101_hvf / 2005-118 / 258_2327

Survey Summary

Survey Position: 56° 38' 01.726" N, 132° 56' 43.098" W

Least Depth: 2.97 m

Timestamp: 2005-118.23:29:53.928 (04/28/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-118 / 258_2327

Profile/Beam: 2432/7

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.1m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-118/258_2327	2432/7	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 1 fathom and 4 feet.

2.29) Profile/Beam - 2711/16 from h11448 / 1006_reson8101_hvf / 2005-118 / 258_2327

Survey Summary

Survey Position: 56° 38' 00.674" N, 132° 56' 45.908" W

Least Depth: 3.00 m

Timestamp: 2005-118.23:30:13.252 (04/28/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-118 / 258_2327

Profile/Beam: 2711/16

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.2m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-118/258_2327	2711/16	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 1 fathom and 4 feet.

2.30) Profile/Beam - 153/16 from h11448 / 1006_reson8101_hvf / 2005-137 / 101_2252

Survey Summary

Survey Position: 56° 40' 38.357" N, 132° 56' 09.736" W

Least Depth: 2.98 m

Timestamp: 2005-137.22:52:39.656 (05/17/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-137 / 101_2252

Profile/Beam: 153/16

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged wreck

extends ~1m off bottom ~9m long x 2m wide

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-137/101_2252	153/16	0.00	000.0	Primary
h11448/1006_reson8101_hvf/2005-137/101_2252	0001	3.54	080.6	Secondary

Hydrographer Recommendations

Chart submerged wreck.

Cartographically-Rounded Depth (Affected Charts):

1 ½fm (17360_1, 16016_1, 530_1)

1fm 4ft (17375_1, 531_1)

3.0m (500_1, 50_1)

Office Notes

Concur, chart wreck with least depth of 1 fathom and 4 feet.

Feature Images

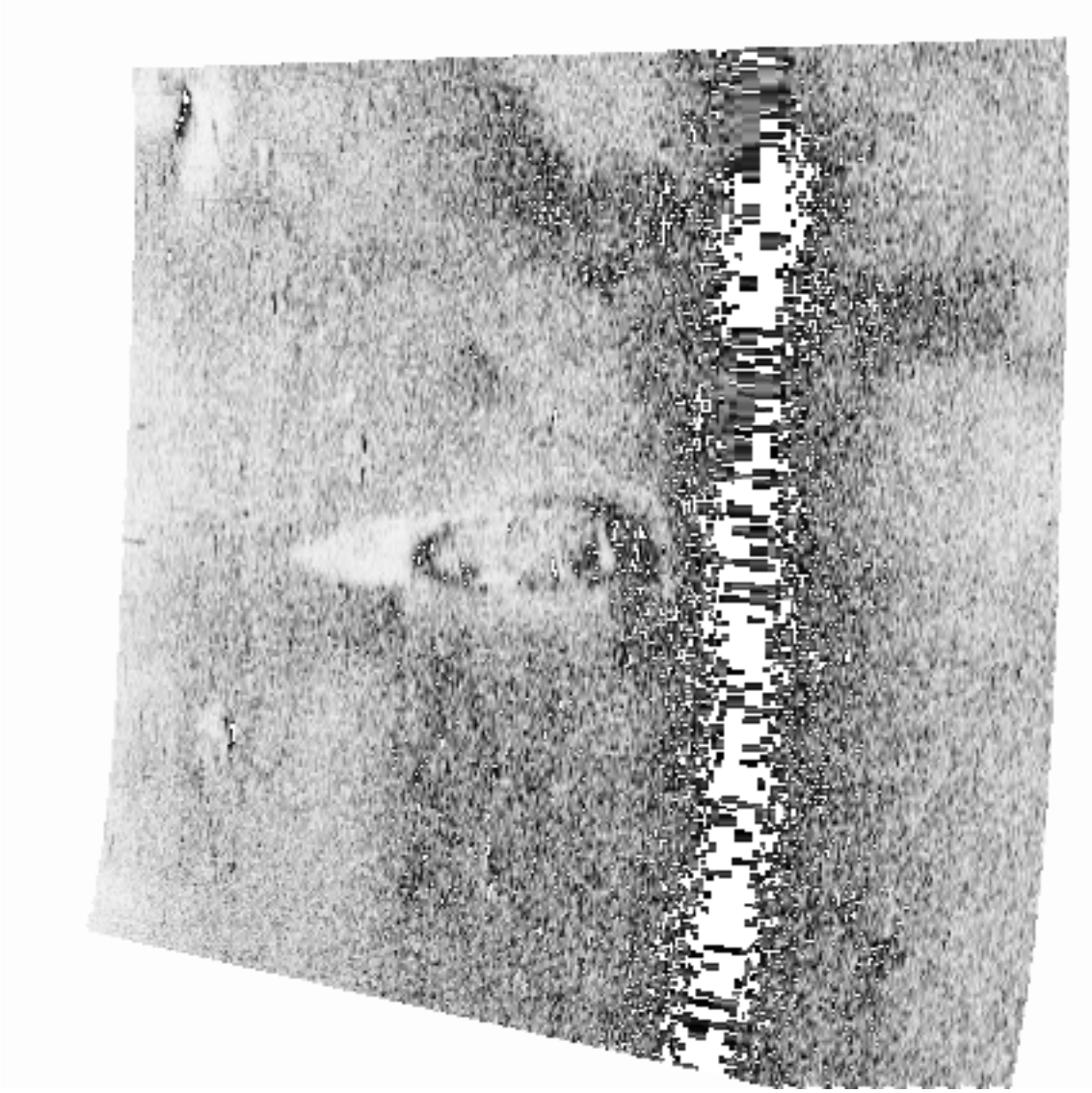


Figure 2.30.1

2.31) Profile/Beam - 866/30 from h11448 / 1006_reson8101_hvf / 2005-138 / 006_1952

Survey Summary

Survey Position: 56° 39' 16.903" N, 132° 55' 18.024" W

Least Depth: 2.14 m

Timestamp: 2005-138.19:53:25.675 (05/18/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-138 / 006_1952

Profile/Beam: 866/30

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged obstruction

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-138/006_1952	866/30	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart obstruction with least depth of 1 fathom and 1 foot.

2.32) Profile/Beam - 500/15 from h11448 / 1006_reson8101_hvf / 2005-138 / 028_1821

Survey Summary

Survey Position: 56° 39' 52.591" N, 132° 55' 52.989" W

Least Depth: 3.59 m

Timestamp: 2005-138.18:21:48.888 (05/18/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-138 / 028_1821

Profile/Beam: 500/15

Charts Affected: 17375_1, 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.5m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-138/028_1821	500/15	0.00	000.0	Primary
h11448/1015_k3k_hvf/2005-138/k3k_050518193200	0001	2.05	098.4	Secondary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 2 fathoms.

2.33) Profile/Beam - 804/7 from h11448 / 1006_reson8101_hvf / 2005-138 / 073_1926

Survey Summary

Survey Position: 56° 39' 06.989" N, 132° 55' 21.555" W

Least Depth: 3.74 m

Timestamp: 2005-138.19:27:45.231 (05/18/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-138 / 073_1926

Profile/Beam: 804/7

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~0.7m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-138/073_1926	804/7	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 2 fathoms.

2.34) Profile/Beam - 68/57 from h11448 / 1006_reson8101_hvf / 2005-138 / 626_1920

Survey Summary

Survey Position: 56° 39' 08.000" N, 132° 55' 13.160" W

Least Depth: 5.42 m

Timestamp: 2005-138.19:20:32.864 (05/18/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-138 / 626_1920

Profile/Beam: 68/57

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.2m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-138/626_1920	68/57	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 2 fathoms and 5 feet.

2.35) Profile/Beam - 169/58 from h11448 / 1006_reson8101_hvf / 2005-138 / 629_1921

Survey Summary

Survey Position: 56° 39' 08.352" N, 132° 55' 18.632" W

Least Depth: 6.60 m

Timestamp: 2005-138.19:22:00.412 (05/18/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-138 / 629_1921

Profile/Beam: 169/58

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged bouy block

extends ~1m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-138/629_1921	169/58	0.00	000.0	Primary
h11448/1015_k3k_hvf/2005-138/k3k_050518194900	0001	2.10	333.3	Secondary

Hydrographer Recommendations

[None]

Office Notes

Do not chart obstn. Least depth is deeper than tabulated channel depths.

2.36) Profile/Beam - 110/61 from h11448 / 1006_reson8101_hvf / 2005-138 / 635_1805

Survey Summary

Survey Position: 56° 39' 28.224" N, 132° 55' 40.828" W

Least Depth: 4.85 m

Timestamp: 2005-138.18:05:47.793 (05/18/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-138 / 635_1805

Profile/Beam: 110/61

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.2m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-138/635_1805	110/61	0.00	000.0	Primary
h11448/1015_k3k_hvf/2005-138/k3k_050518194200	0003	3.23	255.7	Secondary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 2 fathoms and 4 feet..

2.37) Profile/Beam - 185/38 from h11448 / 1006_reson8101_hvf / 2005-138 / 636_1808

Survey Summary

Survey Position: 56° 39' 26.546" N, 132° 55' 33.109" W

Least Depth: 5.61 m

Timestamp: 2005-138.18:08:19.561 (05/18/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-138 / 636_1808

Profile/Beam: 185/38

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.5m off bottom surrounded by a scour

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-138/636_1808	185/38	0.00	000.0	Primary
h11448/1015_k3k_hvf/2005-138/k3k_050518193700	0002	1.33	359.6	Secondary

Hydrographer Recommendations

Chart sounding only.

Cartographically-Rounded Depth (Affected Charts):

3fm (17360_1, 16016_1, 530_1)

3fm 0ft (17375_3, 531_1)

5.6m (500_1, 50_1)

Office Notes

Concur with clarification, chart rock with least depth of 3 fathoms.

2.38) Profile/Beam - 175/135 from h11448 / 1016_reson8125_hvf / 2005-140 / 309_1721

Survey Summary

Survey Position: 56° 41' 31.588" N, 132° 57' 07.992" W

Least Depth: 2.36 m

Timestamp: 2005-140.17:21:58.492 (05/20/2005)

Survey Line: h11448 / 1016_reson8125_hvf / 2005-140 / 309_1721

Profile/Beam: 175/135

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1016_reson8125_hvf/2005-140/309_1721	175/135	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 1 fathom and 2 feet.

2.39) Profile/Beam - 379/82 from h11448 / 1021_reson8101_hvf / 2005-113 / 311_1857

Survey Summary

Survey Position: 56° 38' 16.510" N, 132° 56' 00.241" W

Least Depth: 5.86 m

Timestamp: 2005-113.18:57:47.003 (04/23/2005)

Survey Line: h11448 / 1021_reson8101_hvf / 2005-113 / 311_1857

Profile/Beam: 379/82

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.2m off bottom ~10 meters inside of the dredged channel

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1021_reson8101_hvf/2005-113/311_1857	379/82	0.00	000.0	Primary
h11448/1015_k3k_hvf/2005-138/k3k_050518210600	0003	2.56	027.5	Secondary

Hydrographer Recommendations

Chart sounding only.

Cartographically-Rounded Depth (Affected Charts):

3 ¼fm (17360_1, 16016_1, 530_1)

3fm 1ft (17375_3, 531_1)

5.8m (500_1, 50_1)

Office Notes

Concur with clarrification, chart rock.

[Image file n:/opro325ra05/surveys/h11448/smooth_sheet/preliminary/pss/photos/k3k_05050003_m.tif does not exist.]

2.40) Profile/Beam - 1219/35 from h11448 / 1021_reson8101_hvf / 2005-113 / 349_1813

Survey Summary

Survey Position: 56° 38' 01.514" N, 132° 56' 36.675" W

Least Depth: 5.94 m

Timestamp: 2005-113.18:15:07.963 (04/23/2005)

Survey Line: h11448 / 1021_reson8101_hvf / 2005-113 / 349_1813

Profile/Beam: 1219/35

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.2m off bottom in main channel of Wrangell Narrows surrounded by prominent scour Investigated by divers DN137 2006.

Divers located a large submerged boulder with approximate horizontal dimensions 1.5m x 3m, standing ~2m above surrounding seabed. The boulder is sitting in a sour ~0.35-0.5m deep. The boulder appears to be distinct from the underlying bed rock, as it is heavily undercut on all sides. A large octopus was observed occupying a deep crevice under the boulder's SW corner. The boulder is heavily encrusted with marine growth, and there was no indication it had been struck by a vessel. The surrounding seabed is rocky, with grain size ranging from stones to small boulders, punctuated frequently with slightly larger (~0.5m) boulders.

The dive was accomplished at near-MLLW tide state. Handheld dive depth gauges indicated 19' at the top of the boulder and 25' on the surrounding seabed. The profile, shape, and least depth indicted by multibeam bathymetry appear to be accurate.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1021_reson8101_hvf/2005-113/349_1813	1219/35	0.00	000.0	Primary
h11448/dive/2006-137/dp_dive_2006_137	1/1	0.00	000.0	Secondary
h11448/1015_k3k_hvf/2005-138/k3k_050518205400	0002	1.65	180.2	Secondary
h11448/1015_k3k_hvf/2005-138/k3k_050518210600	0001	3.04	159.6	Secondary

Hydrographer Recommendations

Chart sounding only.

Cartographically-Rounded Depth (Affected Charts):

3 ¼fm (17360_1, 16016_1, 530_1)

3fm 1ft (17375_3, 531_1)

5.9m (500_1, 50_1)

Office Notes

chart rock

[Image file n:/opro325ra05/surveys/h11448/smooth_sheet/preliminary/pss/photos/k3k_05050002_m.tif does not exist.]

Feature Images

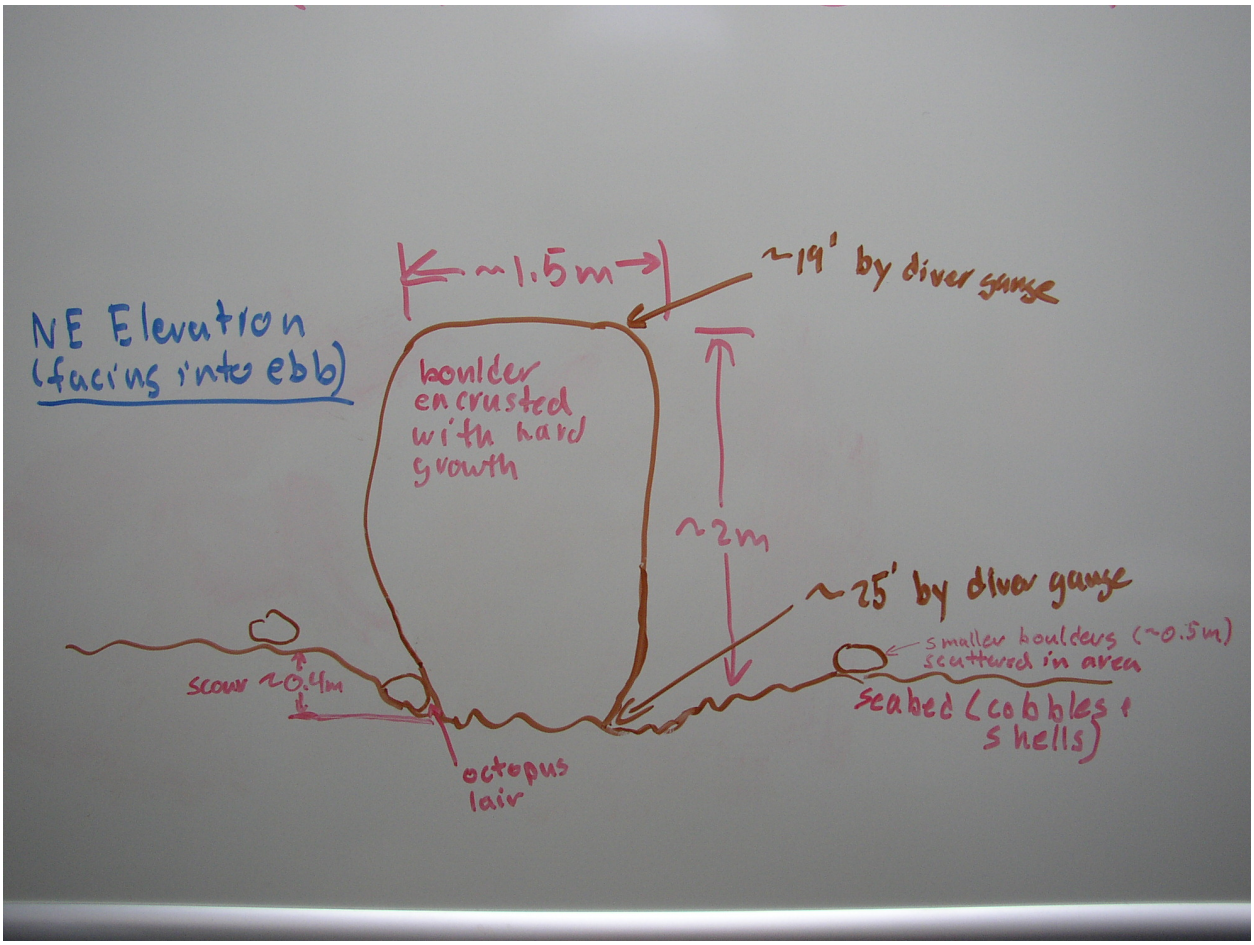


Figure 2.40.1 Diver's sketch, NE Elevation.

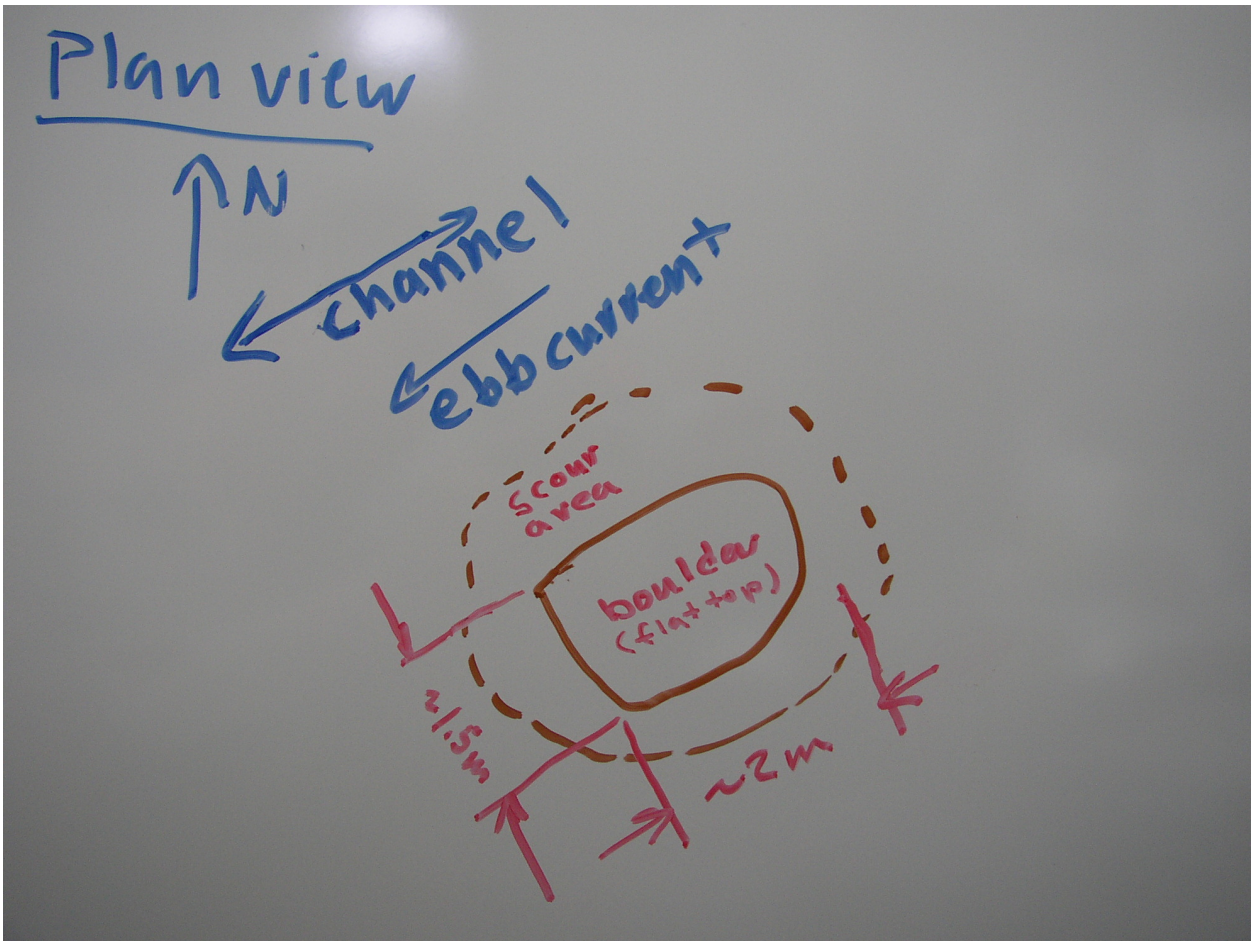


Figure 2.40.2 Diver's sketch, plan view.

2.41) Profile/Beam - 1052/40 from h11448 / 1021_reson8101_hvf / 2005-113 / 355_1754

Survey Summary

Survey Position: 56° 37' 50.792" N, 132° 56' 59.367" W

Least Depth: 6.81 m

Timestamp: 2005-113.17:55:17.648 (04/23/2005)

Survey Line: h11448 / 1021_reson8101_hvf / 2005-113 / 355_1754

Profile/Beam: 1052/40

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged obstruction

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1021_reson8101_hvf/2005-113/355_1754	1052/40	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Do not chart. Least depth of obstruction is deeper than tabulated depths in channel.

2.42) Profile/Beam - 1570/24 from h11448 / 1021_reson8101_hvf / 2005-113 / 360_1737

Survey Summary

Survey Position: 56° 37' 49.471" N, 132° 56' 57.234" W

Least Depth: 5.24 m

Timestamp: 2005-113.17:39:20.893 (04/23/2005)

Survey Line: h11448 / 1021_reson8101_hvf / 2005-113 / 360_1737

Profile/Beam: 1570/24

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.5m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1021_reson8101_hvf/2005-113/360_1737	1570/24	0.00	000.0	Primary

Hydrographer Recommendations

Chart sounding only.

Cartographically-Rounded Depth (Affected Charts):

2 ¾fm (17360_1, 16016_1, 530_1)

2fm 5ft (17375_3, 531_1)

5.2m (500_1, 50_1)

Office Notes

chart rock

2.43) Profile/Beam - 5453/42 from h11448 / 1021_reson8101_hvf / 2005-113 / 374_1714

Survey Summary

Survey Position: 56° 37' 21.878" N, 132° 57' 38.031" W

Least Depth: 6.00 m

Timestamp: 2005-113.17:20:28.113 (04/23/2005)

Survey Line: h11448 / 1021_reson8101_hvf / 2005-113 / 374_1714

Profile/Beam: 5453/42

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1m off bottom in main channel of Wrangell Narrows

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1021_reson8101_hvf/2005-113/374_1714	5453/42	0.00	000.0	Primary

Hydrographer Recommendations

Chart sounding only.

Cartographically-Rounded Depth (Affected Charts):

3 ¼fm (17360_1, 16016_1, 530_1)

3fm 1ft (17375_3, 531_1)

6.0m (500_1, 50_1)

Office Notes

Do not concur. Chart rock.

2.44) Profile/Beam - 943/86 from h11448 / 1021_reson8101_hvf / 2005-113 / 375_1722

Survey Summary

Survey Position: 56° 37' 20.775" N, 132° 57' 38.406" W

Least Depth: 6.42 m

Timestamp: 2005-113.17:23:22.767 (04/23/2005)

Survey Line: h11448 / 1021_reson8101_hvf / 2005-113 / 375_1722

Profile/Beam: 943/86

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~0.4m off bottom in main channel of Wrangell Narrows

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1021_reson8101_hvf/2005-113/375_1722	943/86	0.00	000.0	Primary

Hydrographer Recommendations

Chart sounding only.

Cartographically-Rounded Depth (Affected Charts):

3 ½fm (17360_1, 16016_1, 530_1)

3fm 3ft (17375_3, 531_1)

6.4m (500_1, 50_1)

Office Notes

Do not chart. Least depth of submerged rock is deeper than tabulated depths of channel.

2.45) Profile/Beam - 148/133 from h11448 / 1016_reson8125_hvf / 2005-140 / 305_1659

Survey Summary

Survey Position: 56° 43' 02.480" N, 132° 56' 43.359" W

Least Depth: 14.44 m

Timestamp: 2005-140.16:59:52.932 (05/20/2005)

Survey Line: h11448 / 1016_reson8125_hvf / 2005-140 / 305_1659

Profile/Beam: 148/133

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged pile

This submerged pile was located with SSS and stands at an angle ~3.5 meters above the seafloor

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1016_reson8125_hvf/2005-140/305_1659	148/133	0.00	000.0	Primary
h11448/1015_k3k_hvf/2005-138/k3k_050517165900	0001	8.94	187.0	Secondary

Hydrographer Recommendations

Chart submerged pile.

Cartographically-Rounded Depth (Affected Charts):

7 ¾fm (17360_1, 16016_1, 530_1)

7fm 5ft (17375_1, 531_1)

14.4m (500_1, 50_1)

Office Notes

Concur with clarification, chart as obstruction.

Feature Images

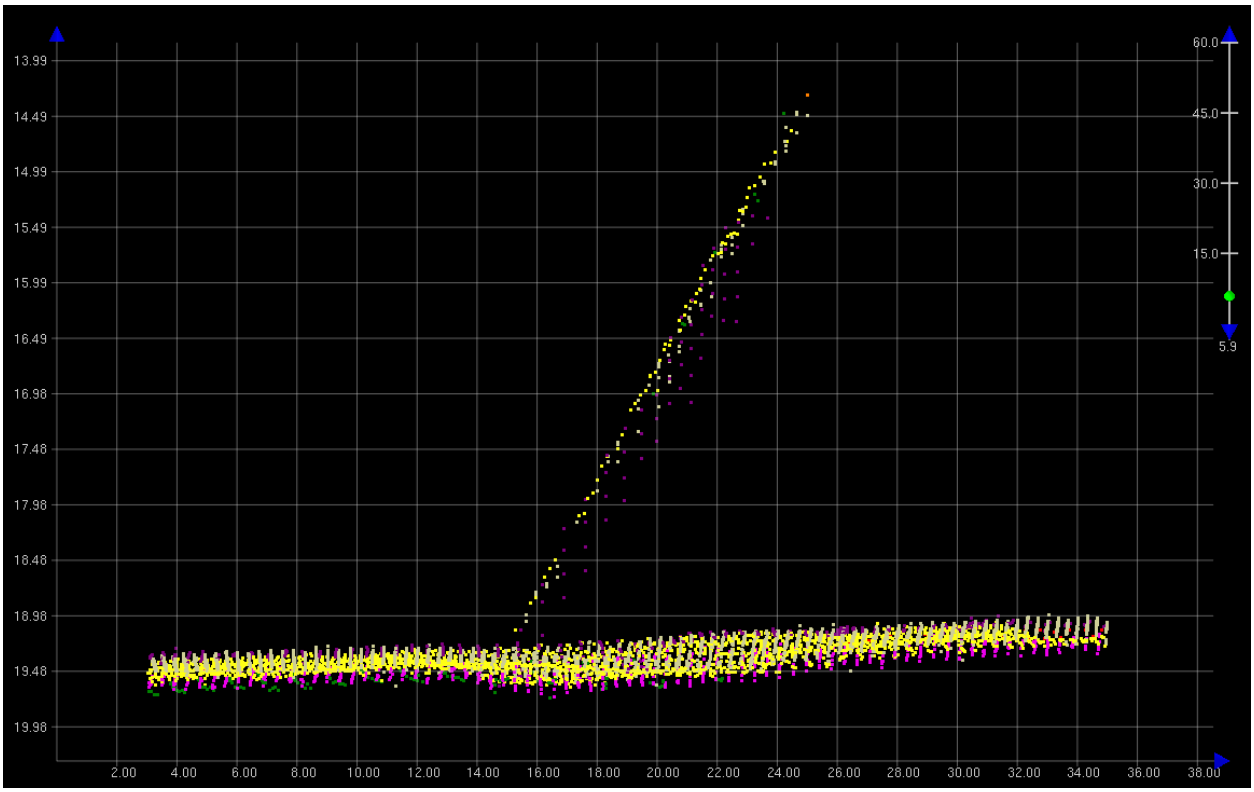


Figure 2.45.1

[Image file n:/opro325ra05/surveys/h11448/smooth_sheet/preliminary/pss/photos/k3k_05050001_m.tif does not exist.]

2.46) Profile/Beam - 138/98 from h11448 / 1006_reson8101_hvf / 2005-118 / 088_0043

Survey Summary

Survey Position: 56° 38' 49.274" N, 132° 55' 20.669" W

Least Depth: 3.39 m

Timestamp: 2005-119.00:43:35.260 (04/29/2005)

Survey Line: h11448 / 1006_reson8101_hvf / 2005-118 / 088_0043

Profile/Beam: 138/98

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock or perhaps a man-made object

extends ~1.6m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2005-118/088_0043	138/98	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Cartographically-Rounded Depth (Affected Charts):

1 ¾fm (17360_1, 16016_1, 530_1)

1fm 5ft (17375_3, 531_1)

3.4m (500_1, 50_1)

Office Notes

Chart rock

2.47) Profile/Beam - 1159/101 from h11448 / 1006_reson8101_hvf / 2006-143 / 715_2202

Survey Summary

Survey Position: 56° 40' 46.487" N, 132° 56' 11.373" W

Least Depth: 9.22 m

Timestamp: 2006-143.22:04:30.925 (05/23/2006)

Survey Line: h11448 / 1006_reson8101_hvf / 2006-143 / 715_2202

Profile/Beam: 1159/101

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.0m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2006-143/715_2202	1159/101	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Do not chart rock, shoaler depths more suitable for charting are in the imidiante vicinity.

2.48) Profile/Beam - 1084/56 from h11448 / 1006_reson8101_hvf / 2006-143 / 719_2151

Survey Summary

Survey Position: 56° 40' 42.770" N, 132° 56' 11.833" W

Least Depth: 7.66 m

Timestamp: 2006-143.21:51:59.571 (05/23/2006)

Survey Line: h11448 / 1006_reson8101_hvf / 2006-143 / 719_2151

Profile/Beam: 1084/56

Charts Affected: 17375_1, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~0.7m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2006-143/719_2151	1084/56	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 4 fathom and 1 foot.

2.49) Profile/Beam - 1001/90 from h11448 / 1006_reson8101_hvf / 2006-143 / 723_2106

Survey Summary

Survey Position: 56° 40' 01.575" N, 132° 55' 47.770" W

Least Depth: 8.51 m

Timestamp: 2006-143.21:07:24.004 (05/23/2006)

Survey Line: h11448 / 1006_reson8101_hvf / 2006-143 / 723_2106

Profile/Beam: 1001/90

Charts Affected: 17375_1, 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.2m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2006-143/723_2106	1001/90	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 4 fathoms and 4 feet.

2.50) Profile/Beam - 2751/95 from h11448 / 1006_reson8101_hvf / 2006-143 / 739_2051

Survey Summary

Survey Position: 56° 38' 55.896" N, 132° 55' 10.043" W

Least Depth: 5.37 m

Timestamp: 2006-143.20:54:24.799 (05/23/2006)

Survey Line: h11448 / 1006_reson8101_hvf / 2006-143 / 739_2051

Profile/Beam: 2751/95

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~0.6m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2006-143/739_2051	2751/95	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 2 fathoms and 5 feet.

2.51) Profile/Beam - 2062/85 from h11448 / 1006_reson8101_hvf / 2006-143 / 740_1936

Survey Summary

Survey Position: 56° 39' 20.447" N, 132° 55' 24.399" W

Least Depth: 2.11 m

Timestamp: 2006-143.19:38:22.897 (05/23/2006)

Survey Line: h11448 / 1006_reson8101_hvf / 2006-143 / 740_1936

Profile/Beam: 2062/85

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~0.6m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2006-143/740_1936	2062/85	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 1 fathom and 1 foot.

2.52) Profile/Beam - 3049/97 from h11448 / 1006_reson8101_hvf / 2006-143 / 751_2047

Survey Summary

Survey Position: 56° 39' 07.831" N, 132° 55' 06.904" W

Least Depth: 4.53 m

Timestamp: 2006-143.20:50:07.579 (05/23/2006)

Survey Line: h11448 / 1006_reson8101_hvf / 2006-143 / 751_2047

Profile/Beam: 3049/97

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~0.7m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1006_reson8101_hvf/2006-143/751_2047	3049/97	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 2 fathoms and 3 feet.

2.53) Profile/Beam - 1656/70 from h11448 / 1021_reson8101_hvf / 2005-113 / 225_2245

Survey Summary

Survey Position: 56° 39' 13.394" N, 132° 55' 16.873" W

Least Depth: 5.25 m

Timestamp: 2005-113.22:47:33.608 (04/23/2005)

Survey Line: h11448 / 1021_reson8101_hvf / 2005-113 / 225_2245

Profile/Beam: 1656/70

Charts Affected: 17375_3, 17360_1, 16016_1, 531_1, 500_1, 530_1, 50_1

Remarks:

submerged rock

extends ~1.2m off bottom

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11448/1021_reson8101_hvf/2005-113/225_2245	1656/70	0.00	000.0	Primary

Hydrographer Recommendations

[None]

Office Notes

Chart rock with least depth of 2 fathoms and 5 feet.

UNITED STATES DEPARMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : November 9, 2005

HYDROGRAPHIC BRANCH: Pacific Hydrographic Branch
HYDROGRAPHIC PROJECT: OPR-O325-RA-2005
HYDROGRAPHIC SHEET: H11448

LOCALITY: Point Humbug to 1.3 NM North of Green Point, AK
TIME PERIOD: April 22 to May 20, 2005

TIDE STATION USED: 945-1317 Anchor Point, AK
Lat. 56 38.3′ N Long. 132 55.7' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 4.602 meters

TIDE STATION USED: 945-0460 Ketchikan, AK
Lat. 55 19.13' N Long. 131 37.57' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 4.433 meters

REMARKS: RECOMMENDED ZONING

Use zone(s) identified as: SA165, SA167, SA168, SA169, SA170, & SA171

Refer to attachments for zoning information.

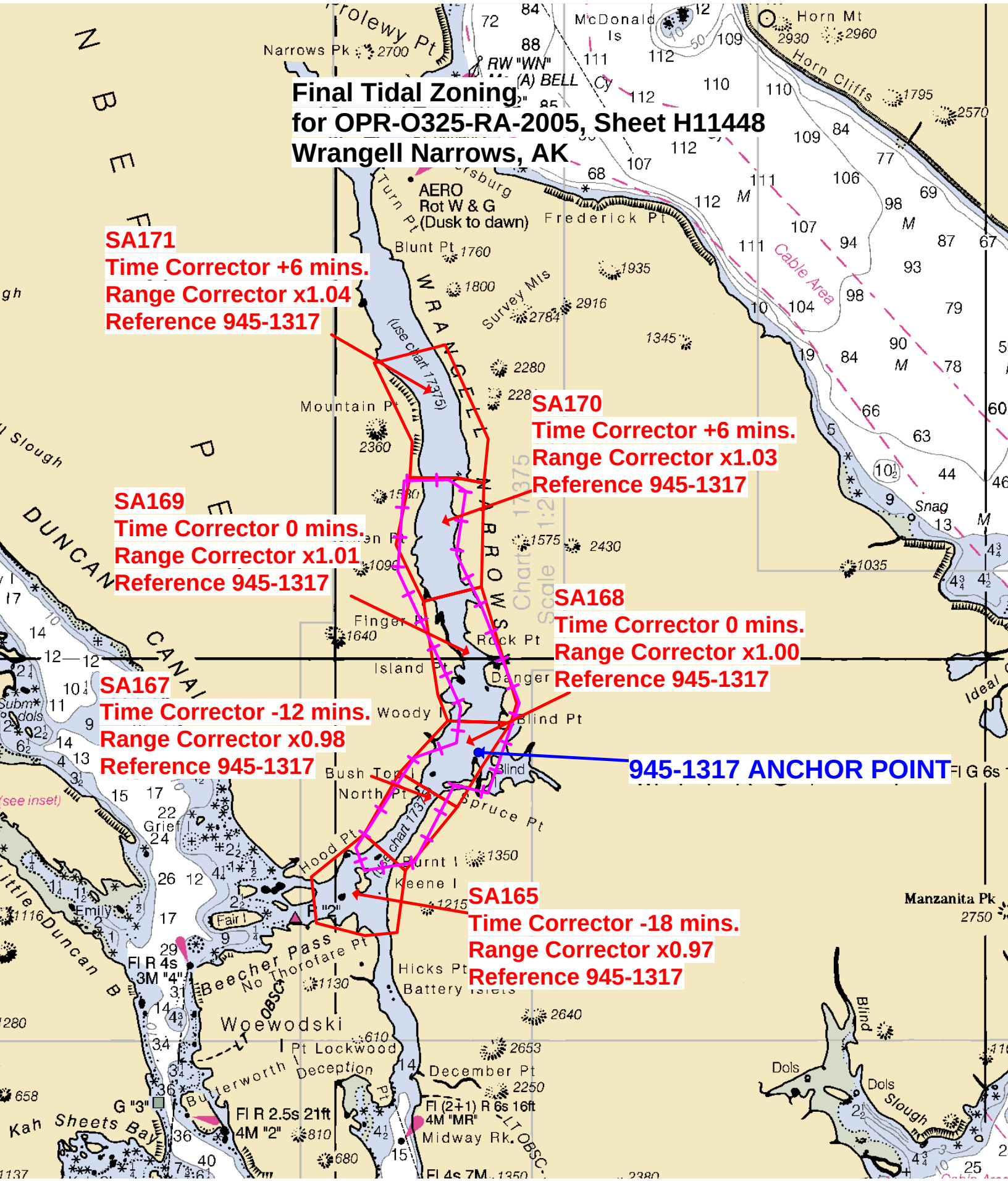
Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time on the 1983-2001 National Tidal Datum Epoch (NTDE).

Note 2: Use tide data from the appropriate station with applicable zoning correctors for each zone according to the order in which they are listed in the Tidezone corrector file (*.ZDF). For example, tide station one (TS1) would be the first choice for an applicable zone followed by TS2, etc. when data are not available.

Note 3: When the alternate reference station, TS2, at Ketchikan, AK is used for the purpose of tide reduction, the estimate total tidal error is calculated to be 0.45m at the 95% confidence level.

Leonard Dick

CHIEF, PRODUCTS AND SERVICES DIVISION


Final Tidal Zoning
for OPR-O325-RA-2005, Sheet H11448
Wrangell Narrows, AK
SA171
Time Corrector +6 mins.
Range Corrector x1.04
Reference 945-1317
SA170
Time Corrector +6 mins.
Range Corrector x1.03
Reference 945-1317
SA169
Time Corrector 0 mins.
Range Corrector x1.01
Reference 945-1317
SA168
Time Corrector 0 mins.
Range Corrector x1.00
Reference 945-1317
SA167
Time Corrector -12 mins.
Range Corrector x0.98
Reference 945-1317
945-1317 ANCHOR POINT
SA165
Time Corrector -18 mins.
Range Corrector x0.97
Reference 945-1317
WRANGELL NARROWS
DUNCAN CANAL
Narrows Pk 2700
Trolewy Pt
McDonald Is
Horn Mt 2930 2960
Horn Cliffs 1795 2570
AERO
Rot W & G
(Dusk to dawn)
Frederick Pt
Turn Pt
Blunt Pt 1760
1800
Survey Mts
2784
2916
1935
1345
Cable Area
Mountain Pt
2360
2280
228
1580
1575
2430
1035
Snag
Finger Pt
1640
Rock Pt
Island Pt
Danger
Woody I
Blind Pt
Blind
Bush Pt
North Pt
Spruce Pt
Hood Pt
Burnt I 1350
Keene I
1215
Grief I
Emily
Fair I
R "2"
Fl R 4s
3M "4"
Beecher Pass
No Thorofare Pt
Hicks Pt
Battery Islets
1130
2640
Woewodski
Pt Lockwood
610
2653
Deception
December Pt
2250
Butterworth Pt
G "3"
Fl R 2.5s 21ft
4M "2"
810
680
Fl (2+1) R 6s 16ft
4M "MR"
Midway Rk
LT OBSC
Fl 4s 7M 1350
Sheets Bay
Kah
Manzanita Pk
2750
Dols
Dols Slough
Ideal
Fl G 6s
(see inset)
(use chart 17375)
Chart 17375
Scale 1:2

UNITED STATES DEPARMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : July 18, 2006

HYDROGRAPHIC BRANCH: Pacific
HYDROGRAPHIC PROJECT: OPR-O325-RA-2006
HYDROGRAPHIC SHEET: H11448

LOCALITY: Point Humbug to 1.3 NM North of Green Point, Wrangell Narrows, AK
TIME PERIOD: May 17 - 23, 2006

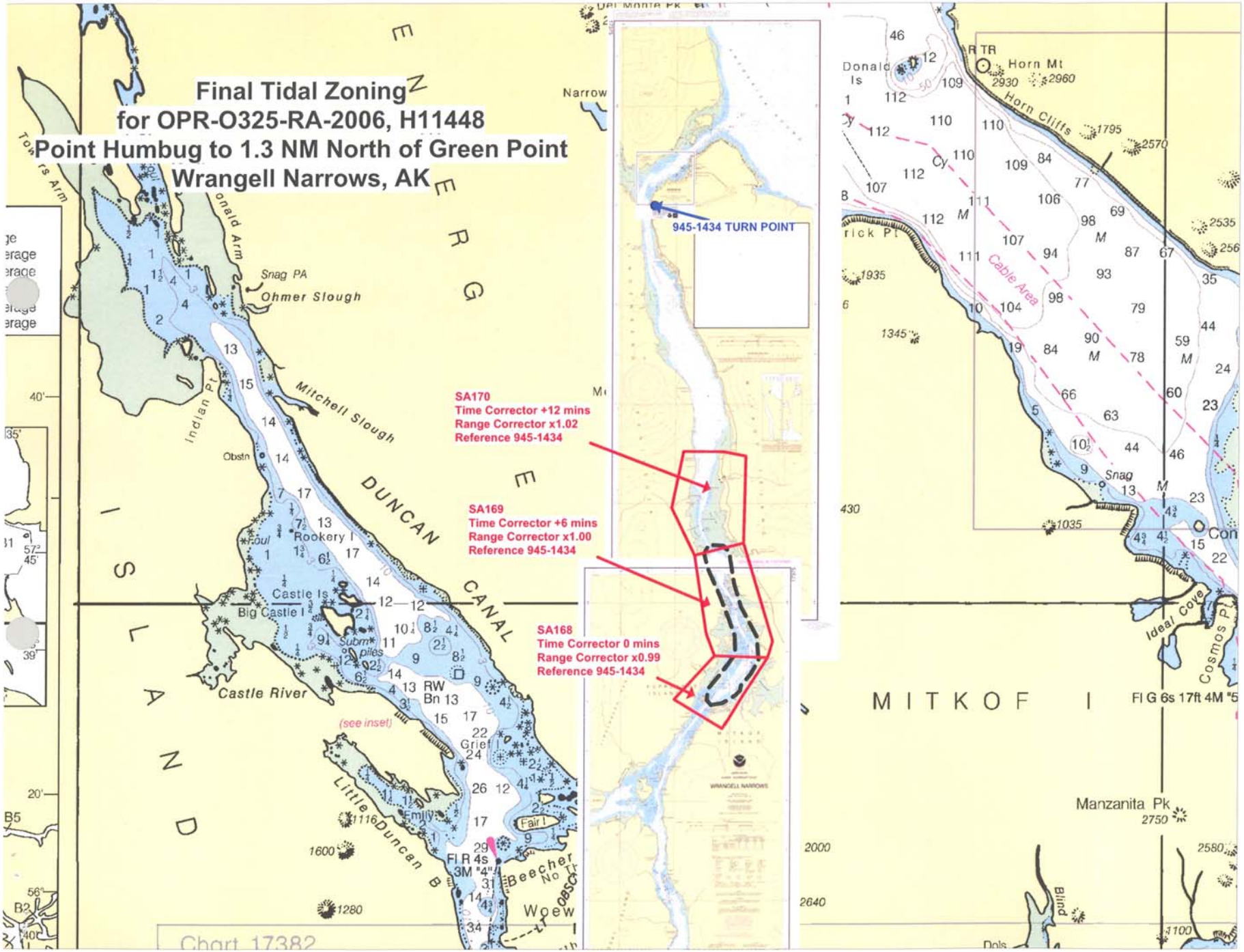
TIDE STATION USED: 945-1434 Turn Point, AK
Lat. 56 48.00'N Long. 132 58.80' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 4.628 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: SA168, SA169 & SA170

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 1983-2001 National Tidal Datum Epoch (NTDE).

For D.R. Wall
CHIEF, PRODUCTS AND SERVICES DIVISION


Final Tidal Zoning
for OPR-O325-RA-2006, H11448
Point Humbug to 1.3 NM North of Green Point
Wrangell Narrows, AK
945-1434 TURN POINT
SA170
Time Corrector +12 mins
Range Corrector x1.02
Reference 945-1434
SA169
Time Corrector +6 mins
Range Corrector x1.00
Reference 945-1434
SA168
Time Corrector 0 mins
Range Corrector x0.99
Reference 945-1434
Snag PA
Ohmer Slough
Mitchell Slough
Indian Pt
Obstn
Rookery I
Castle Is
Big Castle I
Castle River
Subm piles
RW Bn 13
(see inset)
Grief I
Little Duncan B
Emily
Fair I
Fl R 4s 3M "4"
Beecher
Woew I
Duncan Canal
Narrow
Donald Is
Horn Mt
2930
2960
Horn Cliffs
1795
2570
Cable Area
Snag
Ideal Cove
Cosmos Pt
MITKOF I
Fl G 6s 17ft 4M "5
Manzanita Pk
2750
Blind
Chart 17382

H11448 HCell Report

Peter Holmberg, Physical Scientist
Pacific Hydrographic Branch

Introduction

The primary purpose of the HCell is to directly update NOAA ENCs with new survey information in International Hydrographic Organization (IHO) format S-57. HCell compilation of survey H11448 utilized Office of Coast Survey HCell Specifications Version 2.0, April 2, 2007. HCell H11448 will be used to update charts 17375,1:20,000 (21st Ed.; Apr 04, NM 02/02/2008), and US5AK3KM.

1. Compilation Scale

The density of soundings in the HCell are compiled as appropriate to emulate those soundings of Chart 17375, 1:20,000. Position and density of non-bathymetric features included in the HCell have not been generalized from the scale of the hydrographic survey H11448, 1:10,000.

2. Soundings

2.1 Source Data

A 2 meter resolution Combined BASE surface, **H11448_2m_cmbd** was used as the basis for HCell production following Branch certification.

A survey-scale sounding (SOUNDG) feature object source layer was built from the **H11448_2m_cmbd** surface in CARIS BASE Editor. A shoal-biased selection was made at 1:10,000 survey scale using a radius table with values shown in **Table 1**.

Upper limit (m)	Lower limit (m)	Radius (mm)
0	10	3
10	20	4
20	40	4.5

Table 1

2.2 Sounding Feature Objects

In CARIS BASE Editor soundings were manually selected from the high density sounding layer from H11448, and imported into a new layer created to accommodate chart density depths. Manual selection was used to accomplish a density and distribution that more closely represents the seafloor morphology and that emulates density and distribution of soundings on chart 17375 than is possible using automated methods. See section 10.1, Data Processing Notes, for details about the use of manual sounding selection for H11448. The sounding feature object source layer was exported as **H11448_CS**, and imported into HOM.

3. Depth Areas

3.1 Source Data

Using the BASE surface **H11448_2m_cmbd** a single depth area was generated. No depth contours were delivered per OCS HCell Specifications ver.2.0.

3.2 Depth Area Feature Objects

One all-encompassing depth range, 0 meters to 40 meters, was used for all depth area objects below MLLW. Upon conversion to NOAA charting units, this depth range is 0 Fathoms and 0 feet to 21 Fathoms and 5 feet.

Several separate depth areas were created to encapsulate surveyed features outside of the main survey area from the Base surface. DRVALs 1 and 2 for these areas were derived from the ENC US5AK3KM.

4. Meta Areas

The following Meta object areas are included in HCell 11448:

M_QUAL M_NSYS
M_COVR

Meta area objects were constructed on the basis of perimeter lines delineating the surveyed limits, “islands of coverage” for point and features surveyed outside the hydrographic limits, and extents of data gaps inside the survey area. These perimeters were first used to create the Skin of The Earth (SOTE) layer, then were duplicated to the Meta object layers and attributed per the H-Cell Specifications, ver. 2.0.

5. Survey Features

All features for H11448 were delivered in Pydro and imported into HOM. Once in HOM the features were reviewed and incorrect and incomplete S-57 attribution was repaired. Final decisions on the charting of individual features were made in HOM. The office notes tab for each feature in Pydro was populated during HCell compilation to reflect the cartographic actions taken. The office notes are printed in red at the bottom of each page of the feature report exported from Pydro.

Special attention should be given to a feature charted at 56-40-06.7N, 132-55-52.2W. On RNC 17375_1 it is charted as a pile, on RNC 17375_3 it is charted as a subm pile. H11448 has attained complete coverage over the feature. The pile should be removed from both overlapping segments of RNC 17375.

6. Shoreline / Tide Delineation

Depth areas (DEPARE) and Seabed areas (SBDARE) or Land areas (LNDARE) were created for all SOTE features.

7. Attribution

All S-57 Feature Objects have been attributed as fully as possible based on information provided by the Hydrographer and in accordance with OCS H-Cell Specifications, ver. 2.0.

8. Layout

8.1 CARIS HOM Layering Scheme

100	Chart scale soundings
101	Survey scale soundings
200	Group 1 objects (Skin of the Earth)
300	Point objects
400	Line objects
500	Area objects
600-603	Meta layers
800	Items used for creation of Blue Notes

8.2 Blue Notes

Notes regarding data sources are in CARIS HOM as layer 800 as Shapefile sets, **H11448bluenotes_p** and **H11448_bluenotes_l** (with the appropriate extensions) for point and line figures, respectively.

9. Spatial Framework

9.1 Coordinate System

All spatial map and base cell file deliverables are in an LLDG geographic coordinate system, with WGS84 horizontal, MHW vertical, and MLLW (1983-2001 NTDE) sounding datums.

9.2 Horizontal and Vertical Units

During creation of sounding sets in CARIS BASE Editor, and creation of the HCell in CARIS HOM, units are maintained as metric with millimeter resolution. NOAA rounding is applied at the same time that conversion to chart units is made to the metric HCell base cell file, at the end of the HCell compilation process.

A CARIS environment variable, uslXsounding_round, controls the depth at which rounding occurs. Setting this variable to NOAA fathoms and feet displays all soundings equal to or greater than 11 fathoms as whole units. Depths shoaler than 11 fathoms are shown in fathoms and feet.

In an ENC viewer fathoms and feet display in the format X**.**YZZZ, where X is fathoms, Y is feet, and ZZZ is decimals of the foot. For fathoms and feet between 0 and 10 fathoms 4.5 feet (10.75 fms), soundings round to the deeper foot if the decimals of the foot are X**.**Y75000 or greater. For fathoms and feet deeper or equal to 11 fathoms, soundings round to the deeper fathom if feet and decimals of the foot are X**.**45000 (X**.**Y75000) or greater. Drying heights are in feet and are rounded using arithmetic methods. In an ENC viewer, heights greater than 6 feet will register in fathoms and feet using the above stated rules.

<u>HOM Units</u>

Sounding Units:	Meters rounded to the nearest millimeter
Spot Height Units:	Meters rounded to the nearest meter

<u>Chart Unit Base Cell Units</u>

Depth Units (DUNI):	Fathoms and feet
Height Units (HUNI):	Feet (or fathoms and feet above 6 feet)
Positional Units (PUNI):	Meters

10. QA/QC

10.1 Data Processing Notes

Manual chart scale sounding selections were made for this survey. Experience has shown that in areas where bathymetry is steep sided, as in the case of this steep edged channel, automated sounding selection is impractical. None of the default sounding suppression options offered in CARIS BASE Editor or HOM yields an acceptable density and distribution of depths, generally bunching soundings nearshore with too sparse coverage seaward. While the customized options are more practical for this type of terrain, an inordinate amount of time must be spent in experimentation with variations on the algebraic terms in order to devise the most suitable formula, and manual adjustments are still required to the resulting sounding set.

10.2 ENC Validation Checks

H11448 was subjected to QA and Validation checks in HOM prior to exporting to the HCell base cell (000) file. Full millimeter precision was retained in the export of the metric S-57 base cell data set. This data set was converted to a chart unit 000 file. dKart Inspector 5.0 (Service Pack 1) was then used to further check the data set for conformity using the S-58 ver. 2 standard (formerly Appendix B.1 Annex C of the S-57 standard). All tests were run and errors investigated and corrected where necessary.

11. Products

11.1 HSD, MCD and CGTP Deliverables

- H11448 Base Cell File, Chart Units, Soundings compiled to 1:20,000
- H11448 Base Cell File, Chart Units, Soundings compiled to 1:10,000
- H11448 Descriptive Report including end notes compiled during office processing and certification
- H11448 HCell Report
- Blue Notes shape files
- 000 Features File

11.2 File Naming Conventions

HOM file set prefix: *H11448_hc*

MCD Chart units base cell file: *US511448_CU.000*

MCD Chart units base cell file, survey scale soundings: *US511448_SS.000*

Features File (for CGTP): *H11448_Features.000*

11.3 Software

HIPS 6.1:	Management and inspection of Combined BASE surfaces
BASE Editor 2.1:	Combination of Product Surfaces and initial creation of the S-57 bathymetry-derived features
HOM 3.3:	Assembly of the H-Cell, S-57 products, QA
GIS 4.4a:	Setting the sounding rounding variable
Pydro v7.3 (r2252)	Creation of AWOIS, DTON, and Feature reports
dKart Inspector 5.0:	Validation of the base cell file

12. Contacts

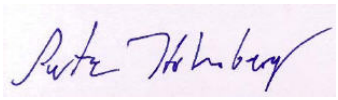
Inquiries regarding this HCell content or construction should be directed to:

Peter Holmberg, Physical Scientist, PHB, Seattle, WA; 206-526-6843;
Peter.Holmberg@noaa.gov.

APPROVAL SHEET
H11448

Initial Approvals:

The survey evaluation and verification has been conducted according to branch processing procedures and the HCell compiled per the latest OCS H-Cell Specifications.



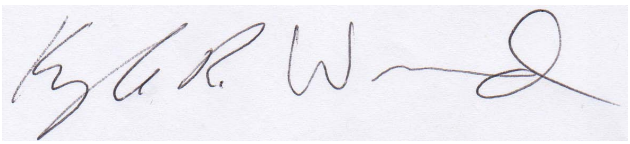
Pete Holmberg
2008.04.21 10:19:53 -07'00'

The survey and associated records have been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, S-57 classification and attribution of soundings and features, cartographic characterization, and verification or disproval of charted data within the survey limits. The survey records and digital data comply with OCS requirements except where noted in the Descriptive Report and are adequate to supersede prior surveys and nautical charts in the common area.

Digitally signed by Gary C. Nelson
DN: cn=Gary C. Nelson, c=US, o=NOAA, ou=Pacific Hydrographic Branch, email=gary.nelson@noaa.gov
Date: 2008.04.22 09:02:03 -07'00'

I have reviewed the HCell, accompanying data, and reports. This survey and accompanying digital data meet or exceed OCS requirements and standards for products in support of nautical charting except where noted in the Descriptive Report.

David Neander
2008.04.21 10:54:35 -07'00'



Kyle R. Ward
AWOIS and SURF check
2008.04.24 10:45:02 -04'00'