

**H11300**

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.:* **NRT3-10-03-04**

*Registry No.:* **H11300**

### LOCALITY

*State:* **Washington**

*General Locality:* **Grays Harbor**

*Sub Locality:* **Hoquiam to Cosmopolis**

**Kathryn Simmons**

TEAM LEADER

LIBRARY & ARCHIVES

DATE:

NOAA FORM 77-28  
(11-72)

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

REGISTRY No

**HYDROGRAPHIC TITLE SHEET**

**H11300**

**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.

**NRT3-10-03-04**

**State:** Washington

**General Locality:** Grays Harbor

**Sub-Locality:** ~~Vicinity of Aberdeen~~ ***Hoquiam to Cosmopolis***

**Scale:** 1:10,000

**Date of Survey:** 03-22-2004 to 07-06-2005

**Instructions dated:** 02-02-2004

**Project No. :** S-N914-NRT3-04

**Vessel:** NOAA Survey Launch 1212

**Chief of party:** Kathryn Simmons

**Surveyed by:** Kathryn Simmons, Janice Landsfeld, Vitad Pradith

**Soundings by echo sounder, hand lead, pole** Echosounder

**Graphic record scaled by:** NRT-3

**Graphic record checked by:** NRT-3

**Automated Plot:** ***HP DesignJet 2500 Plotter (AHB)***

**Verification by:** ***Atlantic Hydrographic Branch Personnel***

**Soundings in** fathoms feet meters at MLW MLLW

**REMARKS:** All times are recorded in UTC.

***Notes in red bold italic were made during office processing.***

# Descriptive Report to Accompany Hydrographic Survey H11300

Scale 1:10,000

2004

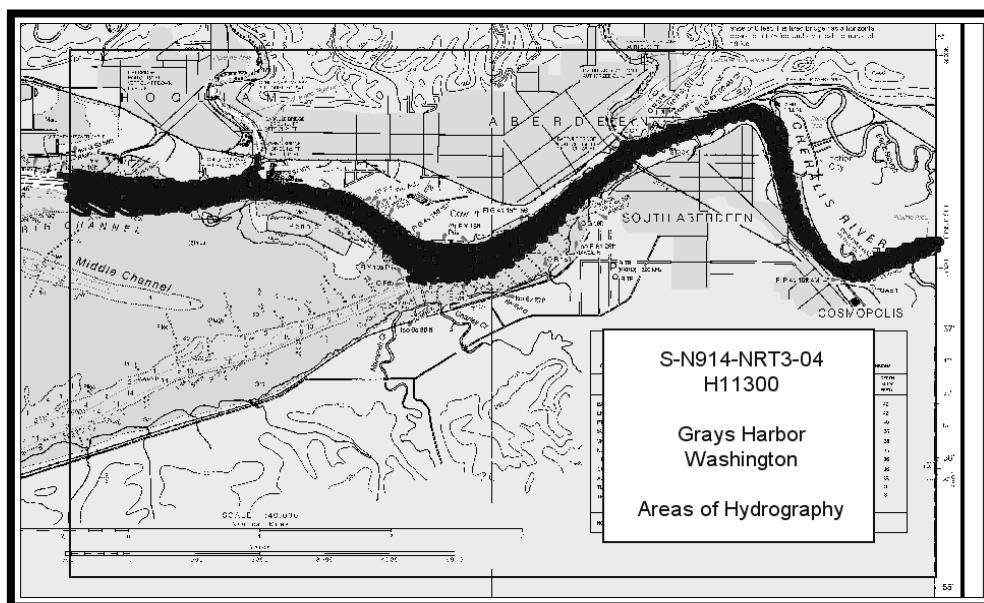
Navigation Response Team 3

Team Leader: Kathryn Simmons

## A. AREA SURVEYED

This basic hydrographic survey was conducted in accordance with Port Instructions S-N914-NRT3-04, Grays Harbor, Washington, issued February 2, 2004. The project responds to a request from the USCG Station at Grays Harbor, Washington, to investigate areas of shoaling. In addition, representatives from the Washington State Department of Ecology are concerned about the potential for grounding resulting in a fuel oil spill. In May of 2001 a grounding resulted from a vessel dragging anchor during a storm and, while the incident was not related to charting issues, there is still concern over charted depths since the area is subject to shifting sediment and shoaling. Currently no tank vessels use the Port of Grays Harbor; but vessel size is typically up to 500-600 feet in length, 3200+ DWT, with drafts up to 40 feet.

H11300, Grays Harbor, Vicinity of Aberdeen, is the third of three surveys for Project S-N914-NRB-04 and includes hydrographic data, side scan sonar data and detached positions. The area surveyed extends from latitude 46°59'09.9"N, southward to latitude 46°55'03.8"N, and from longitude 123°54'41.9" W, eastward to longitude 123°45'03.1" W. Total survey area is approximately 1.36 square nautical miles. Areas of hydrography and side scan sonar coverage are shown below.



Data acquisition was conducted from March 22, 2004 (DN 082) through July 5, 2005 (DN 186).

## **B. DATA ACQUISITION AND PROCESSING**

### **B1. Equipment and Vessels**

NOAA Launch 1212 was the only vessel used for this survey. See Data Acquisition and Processing Report. \*

### **B2. Quality Control**

See Data Acquisition and Processing Report. \*

### **B3. Corrections to Echo Soundings**

See Data Acquisition and Processing Report. \*

## **C. VERTICAL AND HORIZONTAL CONTROL *See also the Evaluation Report***

### **C1. Tides and Water Levels**

| See Data Acquisition and Processing Report. \*

### **C2. Horizontal Datum**

The horizontal control datum for this project is North American Datum of 1983 (NAD83).

### **C3. Position Control**

| See Data Acquisition and Processing Report. \*

\* *Appended to this Report.*

#### C4. Velocity of Sound

Eight sound velocity casts were conducted for the project as shown in the table below:

Day	Latitude/Longitude	Depth(m)	Location
03222004_084	46:58:06.92 N / 123:52:40.30 W	22.7	Grays Harbor
03312004_091	46:58:41.61 N / 123:47:08.65 W	18.4	Grays Harbor
04062004_097	46:57:44.06 N / 123:51:05.65 W	20.4	Grays Harbor
06302004_182	46:57:36.11 N / 123:50:56.09 W	18.3	Grays Harbor
07012004_183	46:57:32.89 N / 123:50:44.16 W	18.0	Grays Harbor
07122004_194	46:58:38.10 N / 123:46:54.74 W	13.9	Grays Harbor
11102004_315	46:57:33.88 N / 123:46:18.85 W	20.6	Grays Harbor
12142004_349	46:58:42.43 N / 123:47:07.51 W	24.4	Grays Harbor

See attached Data Acquisition and Processing Report

#### D. RESULTS AND RECOMMENDATIONS *See also the Evaluation Report.*

##### D1. Chart Comparison

Comparison will be limited to the largest scale chart covering the survey area which is represented on the following chart:

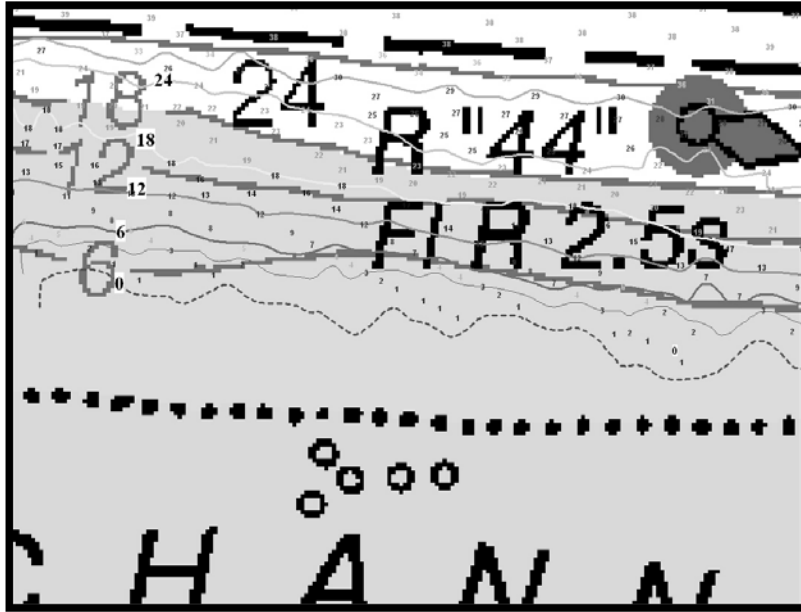
Chart No.	Date	Edition	Scale
18502	June 2004	85th	1:40,000

High water shoreline updates defined by point and line data acquired with the Trimble ProXRS receiver have been submitted directly to Marine Chart Division via Navigation Response Branch, NSD. *High water shoreline updates were not submitted with the present survey.*

##### Comparison of Soundings

Surveyed depths outside the channel maintained by the US Army Corps of Engineers indicate some shifting and changes in the river bed.

In the area immediately south of Grays Harbor North Channel Lighted Buoy “44” located at latitude 46°58’02.087”N, longitude 123°54’09.803”W, the south shore has deepened and steepened so that the 18-foot contour which is charted about 300 meters from the zero curve is now only 100 to 160 meters from the MLLW line which has also shifted northward. See graphic below. *Concur.*



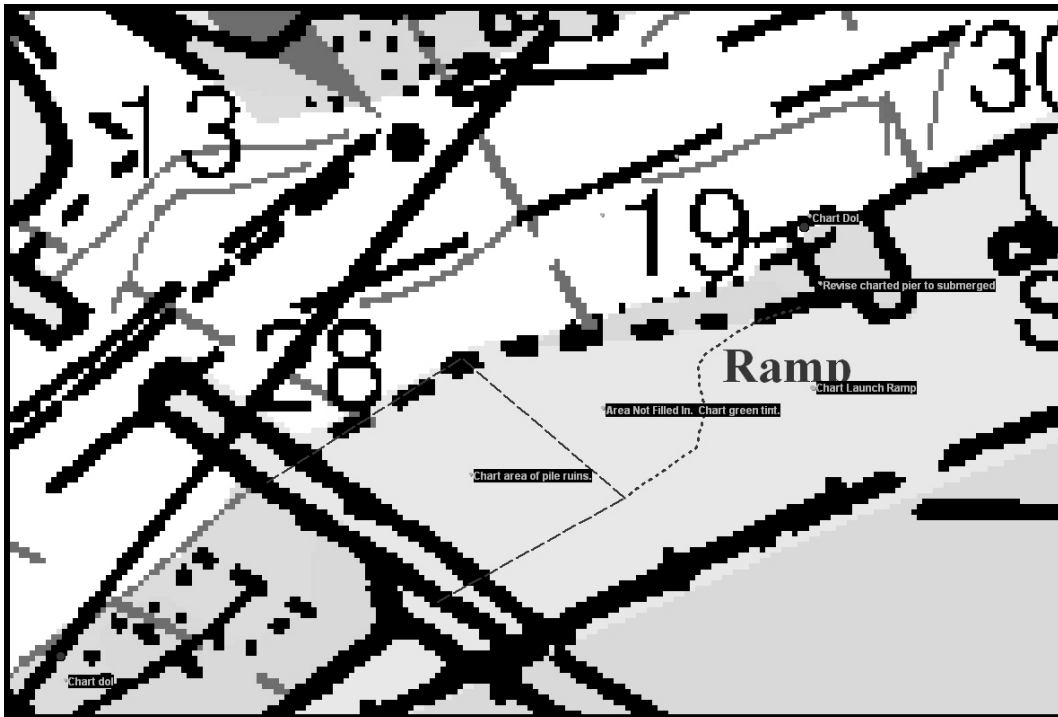
Comparison of Non-Sounding Features

The charted filled area southeast of the Chehalis bridge centered at latitude 46 58' 18"N, longitude 123 48' 20"W, is not filled. The western section consists of piles in ruins (see photos below).

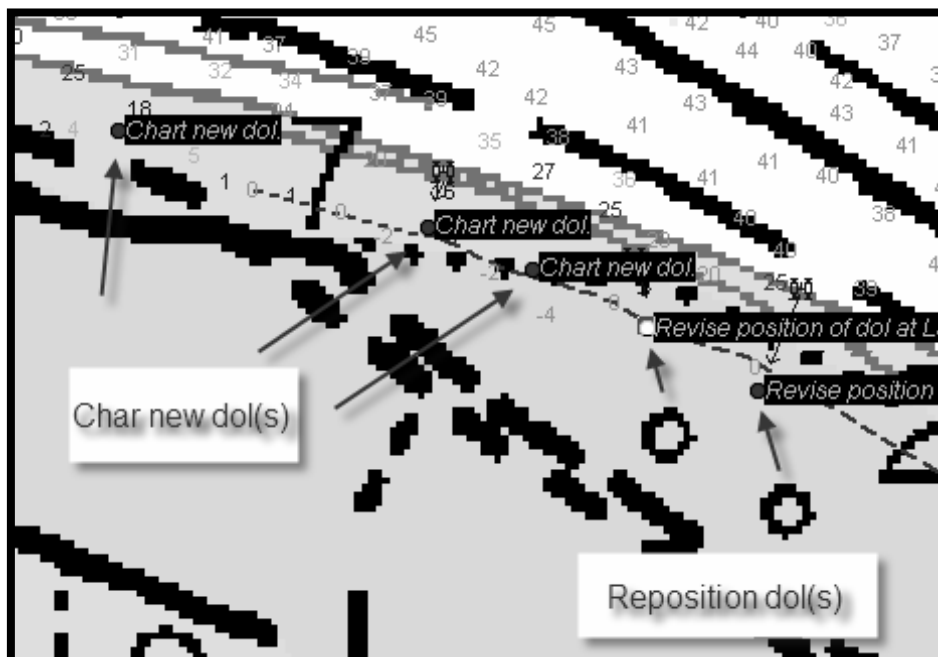


***Revisions to the shoreline were not submitted with the present survey. Defer to Marine Charting Division (MCD) for charting disposition of this area.***

A detached position was acquired at the northeast corner. The eastern portion is covered at high water and should be charted with green tint (See H11300 Shoreline Updates Table). A launch ramp was observed adjacent to this area. Revisions to the area just east of the ramp have been submitted via Fast Track. The charted pier does not exist; however, ruins were observed on the sonagram and the hydrographer recommends revising the pier to submerged. A visible dol was positioned at the pier location. Chart the dol as positioned. See graphic below.



The south shore of Cow Point Reach is characterized by a number of piles and dolphins apparently marking shoal water. Many of these features were not charted or they were incorrectly charted; the offshoremost features were positioned and are depicted on the Shoreline Updates Table. The features charted shoreward of the MLLW line were not accessible for disapproval and should be retained as charted. **Concur. In the vicinity of Latitude 46°57'47"N, Longitude 123°51'30"W.**



The visible wreck charted at latitude 46°57'54.5"N, longitude 123°49'12.1"W was located in ruins (see photo below). Revised positions were acquired on the bow and stern and submitted via fast track. **Concur. Retain visible wreck as charted.**

Numerous other submerged features were detected with 200% side scan sonar coverage and investigated with echosounder development at five meter line spacing. All were resolved and annotated in the Pydro H11300 preliminary smooth sheet. **Concur.**

#### AWOIS Items

One assigned AWOIS item was located in the H11300 project area. See report for Record 53090 (**AWOIS item #53090**) in Appendix I. **See Features Report, Item 2.1 for charting recommendations, appended to this report.**

#### Dangers to Navigation

No Dangers to Navigation were filed within the H11300 project boundaries. **Concur.**

### **D2. Additional Results** *See also the Evaluation Report.*

#### Shoreline

New and revised positions for high water shoreline features (piers, fixed aids, etc) acquired with the Trimble ProXRS receiver have been submitted directly to Marine Chart Division via Navigation Response Branch, NSD. Offshore features were located with detached positions (DP's) which were also used for disprovals of nonexistent charted features. The zero-curve was obtained where it could be safely acquired.

#### Crosslines

Crossline hydrography was not acquired; however, side scan sonar lines run perpendicular to the mainscheme hydrography and were used for sounding comparisons. Agreement is good and no systematic error is apparent. **Concur.**

#### Prior Surveys

The following prior surveys were compared with the current survey for agreement between soundings, shoreline, and other features: **Prior survey H08293 was not available during office processing.**

Registry No.	Year Surveyed	Scale	Datum
H08293	1956	1:10,000	NAD27

#### Prior H08293:

Survey H-8293 survey overlaps with approximately two-thirds of the current survey, from the western limit of H11300 to the Chehalis Bridge at longitude 123°48'08"W. Current depths, shoreline, and features are all at variance with the prior survey in their common areas. The river



has shifted course, channel dredging has occurred, shoreline features have been altered or removed and new construction is in place

### Aids to Navigation

Fixed aids to navigation positioned with the Trimble ProXRS receiver have been submitted directly to NOAA's Marine Chart Division. A text file of these positions is included in Appendix IV. ***Filed with the field digital data. AToNs were not applied to the PSS data.***

### Bridges, Cables, Pipelines

The position of the Chehalis River Bridge spanning the Hoquiam Reach of Chehalis River at approximate latitude 46°58'21.2"N, longitude 123°48'32.5"W was updated with Trimble DGPS line data which has been submitted to Marine Chart Division. ***Not applied to the PSS data.***

The overhead power cable spanning the river at latitude ***46°57'30"N, longitude*** 123° 45'47"W was confirmed. ***Concur. Retain as charted.***

### Statistics

<b>Description</b>	<b>Quantities</b>
Total Nautical Miles	144.99
Side Scan Sonar	34.11
MS Hydrography	98.03
Development	10.67
Square Nautical Miles Hydrography	1.29
Square Nautical Miles SSS	1.36
Velocity Casts	8
Bottom Samples	0
AWOIS Items	1
Tide Stations Installed	1
Position Control Stations Established	0

### Miscellaneous

Observations in the field were logged to a target file and imported into Mapinfo as Field Notes. The daily field notes are included in subfolder "Field Notes" within folder "Field Products." The daily notes are combined in the table, H11300 Field Notes, which is included with the Mapinfo files for information. \*

A separate table, H11300 Indexed Notes, was created in Mapinfo to include recommendations to the cartographer. This table is included in the "Field Plots" subfolder "Mapinfo." A text file of these notes is included in Appendix IV. \*

***\* Filed with the field digital data.***

### Recommendations

In view of the extensive changes in bottom and shoreline topography, particularly the shifting of exposed and unexposed shoals, as well as the numerous revisions to cultural features along the

shoreline, the hydrographer recommends new photogrammetry for all of Grays Harbor.

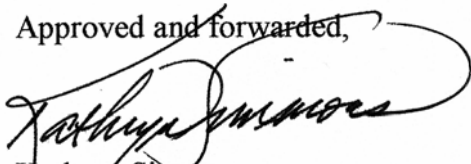
#### **E. APPROVAL SHEET**

Standard field surveying and processing procedures were followed in producing this survey in accordance with the Navigation Response Branch Operations Manual, the Hydrographic Manual, Fourth Edition; the Hydrographic Survey Guidelines; and NOS Hydrographic Surveys Specifications and Deliverables.

The data were reviewed daily during acquisition and processing.

The digital data and supporting records have been reviewed by me, are considered complete and adequate for charting purposes, and are approved. All records are forwarded for final review and processing to N/CS33, Atlantic Hydrographic Branch.

Approved and forwarded,

A handwritten signature in black ink, appearing to read 'Kathryn Simmons', written over a large, stylized loop.

Kathryn Simmons  
Team Leader

**Data Acquisition and Processing Report**  
**S-N914-NRT3-03**  
**Entrance to Grays Harbor—Approaches to Aberdeen—Vicinity of Aberdeen**  
**Hydrographic Letter Instructions dated November 7, 2003**  
**Team Leader: Kathryn Simmons**

This report includes descriptions of equipment used and methods employed by Navigation Response Team 3 during acquisition and processing of hydrographic survey data. It does not necessarily apply to fast-track data – a separate report will accompany data submitted directly to the Marine Chart Division.

**A. EQUIPMENT**

Two vessels were used during this survey to acquire single-beam echosounder data, side scan sonar data, sound velocity profiles and detached positions. The vessels and any vessel configuration changes are described below.

NOAA Survey Launch 1212 is a 4.8-ton SeaArk Commander (SAMA115510000) acquired in January 2001. From the beginning of project S-N914-NRT3-03 through May 2004, hull length was 27 feet and the vessel was powered by two 150-horsepower Evinrude-Johnson two-stroke outboards. On May 25, 2004 (DN 146), Launch 1212 was repowered with two 150-horsepower Yamaha four-stroke outboards; and, as a result of the additional weight of the new motors, it was necessary to extend the hull three feet. On August 4, 2004 (DN 217), the vessel was transported back to the manufacturer in Arkansas for the hull modification and was returned to service on September 30 (DN 274). Launch 1212 is equipped with a Dell Pentium II PC which runs the primary software associated with data collection

NOAA Launch S3003, a 30-foot SeaArk, is eight feet wide and displaces 4.8 tons and was used for data collection from July 30 to August 24, 2004 (DN 212-237), while Launch S1212 was undergoing modifications. Launch S3003 is powered by two 130-horsepower Honda four-stroke outboards and is also equipped with a Dell Pentium II PC for running the primary software associated with data collection.

A Trimble backpack DGPS system was used to position fixed aids to navigation, high water features, and natural shoreline.

**Sounding Equipment:**

**1. Single-Beam Echosounder (SBES)**

Two Innerspace 455C single-frequency (208 kHz), vertical beam echosounders (VBES) were used for data collection. The dates each was employed on each of the two vessels used for this project are shown in the table below which also summarizes vessel configuration changes.

Dates	Vessel used	Equipment	Echosounder
March 3-May 25, 2004	Launch S1212	Evinrude-Johnson 150-hp, two-stroke outboard motors	Innerspace 455, S/N 192
May 26-July 29, 2004	Launch S1212	Yamaha 150-hp, four-stroke outboard motors	Innerspace 455, S/N 192
July 30-August 3, 2004	Launch S3003	Honda 150-hp, four-stroke outboard motors	Innerspace 455, S/N 194
August 4-August 24, 2004	Launch S3003	Honda 150-hp, four-stroke outboard motors	Innerspace 455, S/N 192
August 25, 2004-Current	Launch S1212	Yamaha outboards with hull Extension	Innerspace 455, S/N 192

Vessel configuration details and offset measurements are included in Appendix III\* of this report.

\* *Filed with the field digital data.*

The echosounder records both analog and digital data which may be acquired in feet, fathoms or meters. The unit has a beam width of eight degrees and an optional beam width of three degrees. Soundings were acquired in meters with an assumed speed of sound through water of 1500 m/sec. During data collection the analog screens were continuously captured and stored on an external zip drive for reference during digital data processing.

Sounding lines were run at spacing sufficient to define major contours. Line spacing was reduced over shoal areas and for contact development.

Lead line checks were performed periodically throughout the project to verify fathometer accuracy.

Coastal Oceanographic's Hypack Max Gold software was used for vessel navigation and line tracking during hydrographic data acquisition. Hypack was also used to log VBES data in "raw" format and to record detached positions in the form of .tgt files.

## 2. Side Scan Sonar (SSS)

Each vessel is also equipped with a Klein 3000 sonar system. The system includes:

- Dual frequency (100 kHz, 500 kHz) towfish with 300 PSI pressure sensor
- Transceiver Processing Unit (TPU)
- Workstation Display and Control Unit (WDCU)
- Thirty-five meters of Kevlar reinforced tow cable
- SonarPro software and VX Works TPU operating system

The horizontal beam widths for the low and high frequencies are 1° and 2°, respectively; vertical beam width is 40°. Maximum low-frequency range scale for the Klein 3000 is 500 meters; at high frequency maximum range scale is 150 meters. The high-frequency data were recorded and stored in the data base; the low frequency image is observed during data collection but not converted separately.

A range scale of 100 meters was maintained except in very deep water or during development of submerged obstructions when the scale was reduced to 75 or 50 meters. The towfish height above the bottom was maintained at 8 to 20 percent of the range scale whenever possible. Exceptions occur in very

shallow areas or in areas where rapidly changing terrain raises the risk of hitting the towfish on the bottom.

Side scan sonar lines were spaced according to the range scale appropriate for water depth to assure overlap of at least 25 meters and to assure 200% coverage.

Vessel speed was maintained at or below five knots to ensure that an object one meter square could be detected across the sonar swath. Confidence checks were performed by observing the outer edges of the sonargram while moving alongside pier faces or known submerged targets.

Sonar images of visible objects or known submerged objects (such as buoy blocks), were captured during data acquisition using the program SnagIt. Identification of these images before and during processing helped to avoid selection of these objects as side scan contacts to be investigated.

All SSS data collection was controlled with SonarPro software operating in a Microsoft Windows 2000 environment on the WDCU. Control signals were sent to the towfish and data were returned from the towfish via the TPU; the sonar data was recorded digitally and stored on the WDCU in the Klein SDF format.

Vessels S1212 and S3003 are equipped with a Dynapar cable counter, which logs to the WDCU via the Hypack delph signal the length of deployed towfish cable. The measurements are made by counting revolutions of the towing block on the J-frame. Before each use, the cable counter was calibrated by adjusting the readout to reflect the measured marking on the towfish cable at the tow point.

### **3. Diver Least-Depth Gauge**

Not applicable

### **Positioning Equipment:**

#### **1. Survey Launches S1212 and S3003**

Each launch is equipped with a Trimble DSM212L integrated 12-channel GPS receiver and a dual-channel DGPS beacon receiver. The beacon receiver can simultaneously monitor two independent U.S. Coast Guard (USCG) DGPS beacons. There are three modes: Auto-Range, which locks onto the beacon nearest the vessel; Auto-Power, which locks onto the beacon with the greatest signal strength; and Manual, which allows the user to select the desired beacon. Additionally, the DSM212L can accept differential correctors (RTCM messages) from an external source such as a user-established DGPS reference station.

The following parameters were monitored in real-time through Trimble's TSIP Talker software to ensure position data quality: 1) number of satellites used in the solution, 2) horizontal dilution of precision (HDOP), 3) latency of correctors, and 4) beacon signal strength. The DSM212L was configured to the auto-range mode, to go off-line if the age of DGPS correctors exceeded 20 seconds, and to exclude satellites with an altitude below 8 degrees.

#### **2. Trimble Backpack Unit**

A Trimble backpack unit was used to collect DGPS data on fixed aids to navigation, high water features and natural shoreline. The unit consists of the following:

- Pro XRS 12-channel DGPS receiver
- Combined L1 GPS/Beacon/Satellite Differential Antenna
- TSCe data logger with Windows CE operating system

The ProXRS receiver was set to collect data using the following restrictions:

Minimum No. of satellites:	5
Maximum PDOP:	6
Minimum SNR:	4
Minimum Satellite elevation:	15 degrees

Position data were collected at one-second intervals; periods of collection varied as follows:

Major fixed aids to navigation:	3 to 5 minutes
Range lights:	5 minutes
Private fixed aids	5 to 30 seconds
Shoreline construction	1 second point data or line data

Trimble's TerraSync software was used on the Trimble TSCe data logger to collect DGPS data in the field. A data dictionary created by NRT3 was used in the collection process to categorize and add metadata to features. Features were collected under one of three categories: fixed aids, point data, or line data. A copy of the data dictionary is included in Appendix IV. *Filed with the field digital data.*

Trimble's Pathfinder Office software was used to download and convert data from the data logger, and to verify that individual points and lines met accuracy standards. Positions on major features with standard deviations greater than 0.075 meters were rejected.

## **B. DATA PROCESSING AND QUALITY CONTROL**

### **Single-Beam Echosounder Data**

Following acquisition, single-beam echosounder data were converted from HYPACK to the CARIS HDCS format using the CARIS HIPS conversion wizard. SBES navigation data were checked using CARIS HIPS attitude and navigation editors. Navigation fliers were rejected and the depths either interpolated between good navigation points or rejected. Depths were then edited in the single beam editor by comparing the digital record with screen captures from the echosounder. The digital record was edited to ensure that peaks of shoals and abrupt changes in slope were properly digitized by the echosounder.

### **Side Scan Sonar Data:**

Following acquisition, SSS data were also converted to the CARIS HDCS format using the CARIS HIPS conversion wizard, then reviewed with the attitude and navigation editors in the same manner as the SBES data. Using the CARIS SSS Editor, fish height was recomputed (if necessary) and the data were slant-range corrected. Sonargrams were then examined and significant contacts (shadow height of 1.0 meters or greater) selected for further development. The chosen contacts were exported to Mapinfo, where the HYDRO-MI program was used to generate target and line files to be used in Hypack. Five-meter line spacing was employed to develop the SSS contacts using SBES.

## **Processing Software:**

CARIS HIPS SIPS NT software was used to convert and edit VBES/SSS data, apply vertical and horizontal correctors, and analyze VBES/SSS data and detached positions.

NOAA's Pydro software supplied by the Hydrographic Systems and Technology Program (HSTP) was used for analyzing VBES data and SSS contacts, processing and editing detached positions, excessing data, and creating preliminary smooth sheet (PSS) files.

HSTP's HydroMI Mapbasic program was used in combination with Mapinfo software for creating Hypack line and target files, creating CARIS tide files, drawing tracks, and drawing the PSS file created by Pydro.

Mapinfo software was used to plan survey operations, analyze collected hydrographic and Trimble backpack data, and create final survey plots.

Sound velocity profiles were computed from raw pressure, temperature, and conductivity measurements using HSTP's Velocity Program for Windows (VelocWin), 8.50.

A complete list of software and versions is included in Appendix I. \*

Data processing flow diagrams are included in Appendix II. \*

## **C. CORRECTIONS TO ECHO SOUNDINGS**

### **Sound Velocity**

The speed of sound through the water was determined by periodic sound velocity casts conducted in accordance with the NOS Hydrographic Surveys Specifications and Deliverables Manual

Corrections for speed of sound through the water column were computed from data obtained with a Seacat conductivity, temperature and depth profiler, model SBE-19, except for DNs 171 and 187, when an Odom Digibar Pro was used. NOAA's VELOCWIN software was used to process all casts and generate sound velocity profiles for CARIS. Sound velocity correctors were applied using the 'nearest in time' sound velocity cast.

Calibration reports for the SBE-19 profiler and the Odom Digibar are included in Appendix IV\* of this report. Dates and locations of the sound velocity casts are included in Section C of each survey's descriptive report.

### **Vessel Offsets and Dynamic Draft Correctors**

#### Static Draft

Static draft measurements for Launch S1212 were calculated on three occasions: 1) January 29, 2001 (DN 029) with Evinrude-Johnson motors; 2) June 15, 2004 (DN 177) with Yamaha motors; and 3) October 4, 2004 (DN 278) with the modified hull.

\* *Filed with the field digital data.*

In each case, the following procedure was employed: First, the depth of the transducer face from a reference mark on the hull was measured. Next, with the launch in the water, fuel tanks half full and two persons aboard, the depth from this reference mark to the waterline was measured. Combining the two measurements, a static draft of 0.4 meters was calculated.

### Dynamic Draft

Settlement and squat measurements for VN S1212 were calculated on three occasions: 1) January 30, 2001 (*DN 030*) in San Diego Bay with Evinrude-Johnson motors; 2) June 15, 2004 (*DN 177*) in Grays Harbor's Hoquiam Reach with Yamaha motors; and 3) October 4, 2004 (*DN 278*) in Grays Harbor near Ocean Shores with the modified hull. Field records are included in Appendix V. \*

Transducer and antenna offsets, static draft, and dynamic draft correctors were incorporated into the 'vessel config' files, and applied during the merge process in CARIS. Values for offsets and dynamic draft data are included in Appendix III. \*

### **Tide Correctors**

The operating National Water Level Observation Network (NWLON) station at Toke Point, WA (944-0910) served as datum control for the survey area. Additionally, in compliance with Section 5 of Project Instructions (revised April 23, 2004), a supplemental tide station was established on February 18, 2004, at the historical site shown below:

<b>Station Number</b>	<b>Station Name</b>	<b>Latitude</b>	<b>Longitude</b>
944-1187	Aberdeen, WA	46° 58.1' N	123° 51.2' W

Verified, six-minute water levels relative to Mean Lower Low Water were downloaded from the NOAA, NOS, Center for Operational Oceanographic Products and Services (CO-OPS) web site: ([www.http://co-ops.nos.noaa.gov/data\\_res.html](http://co-ops.nos.noaa.gov/data_res.html)). These were imported into a text file on a local computer and appended to the CARIS tide file, 9441187.tid.

There are 14 tide zones within the project limits. The tide corrector values, referenced to the tide station at Aberdeen, are provided in the zoning file *N914NRBCORP\_rev5.zdf* which is included with the project data.

Using CARIS HIPS, the tide data were loaded, soundings were sorted into the appropriate zone, time and height adjustments were computed and corrected tides were applied to sounding data. These correctors are included in Appendix IV. \*

Finally, the CARIS "merge" utility applies tide, draft, dynamic draft, and vessel offset correctors and creates the depth file used by Pydro.

\* *Filed with the field digital data.*



## **Data Decimation and Field Sheet Production**

All soundings were combined in the appropriate HDCS project. To produce the Final Field Sheet, all non-rejected soundings that passed all other quality-assurance checks were imported into a Pydro Preliminary Smooth Sheet (PSS) file using shoal-biased “line-by-line” binning and a cell size of 1.5 millimeters at the scale of the survey. For this 1:10,000 scale survey, data were imported using a 15 meter cell size. The resultant thinned data were then excessed in Pydro using a 3-millimeter character size, which ensures that the largest spacing between selected soundings does not exceed 5 millimeters at survey scale. Final selected soundings were exported to Mapinfo. Digital terrain models (DTMs) of sounding data created by Vertical Mapper in Mapinfo help to expose potential hazards as well as depth errors and systematic errors.

## **D. APPROVAL**

As Chief of Party, I have ensured that standard field surveying and processing procedures were used during this project in accordance with the Hydrographic Manual, Fourth Edition; Hydrographic Survey Guidelines; Field Procedures Manual, and the NOS Hydrographic Surveys Specifications and Deliverables Manual, as updated for 2004.

I acknowledge that all of the information contained in this report is complete and accurate to the best of my knowledge.

Approved and Forwarded:

\_\_\_\_\_  
Kathryn Simmons  
Navigation Response Team 3

# H11300 Features Report

**Registry Number:** H11300  
**State:** Washington  
**Locality:** Grays Harbor  
**Sub-locality:** Vicinity of Aberdeen  
**Project Number:** OPR -S-N914-NRT3  
**Survey Dates:** 03/22/2004 - 07/05/2005

## Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	5103	Dolphin	-6.32 m	046° 57' 39.361" N	123° 50' 09.098" W	---
1.2	5304	Dolphin	-3.66 m	046° 58' 28.135" N	123° 46' 46.068" W	---
1.3	5305	Dolphin	-5.68 m	046° 58' 27.537" N	123° 46' 45.953" W	---
1.4	5317	Sounding	-1.10 m	046° 58' 23.357" N	123° 46' 43.999" W	---
1.5	5318	Stationary structure, floating or fixed	-1.11 m	046° 58' 22.642" N	123° 46' 43.943" W	---
1.6	5328	Sounding	-1.17 m	046° 58' 16.759" N	123° 46' 41.994" W	---
1.7	5501	Dolphin	-4.82 m	046° 58' 40.178" N	123° 46' 53.046" W	---
1.8	5502	Pile	-4.33 m	046° 58' 39.894" N	123° 46' 53.420" W	---
1.9	5503	Pile	-5.86 m	046° 58' 42.593" N	123° 46' 59.217" W	---
1.10	5504	Pile	-6.88 m	046° 58' 37.767" N	123° 47' 06.296" W	---
1.11	5505	Pile	-5.90 m	046° 58' 37.315" N	123° 47' 04.911" W	---
1.12	5506	Pile	-5.91 m	046° 58' 36.992" N	123° 47' 03.722" W	---
1.13	5507	Pile	-3.92 m	046° 58' 36.438" N	123° 47' 03.374" W	---
1.14	5508	Pile	-3.45 m	046° 58' 32.265" N	123° 46' 59.480" W	---
1.15	5509	Pile	-5.96 m	046° 58' 30.439" N	123° 46' 58.583" W	---
1.16	5512	Pile	-3.00 m	046° 58' 29.652" N	123° 46' 57.987" W	---
1.17	5513	Pile	-6.00 m	046° 58' 29.634" N	123° 46' 57.298" W	---
1.18	5514	Dolphin	-3.53 m	046° 58' 27.394" N	123° 46' 55.763" W	---
1.19	5515	Pile	-6.04 m	046° 58' 28.708" N	123° 46' 56.907" W	---
1.20	5516	Dolphin	-6.06 m	046° 58' 22.348" N	123° 46' 53.415" W	---
1.21	5518	Dolphin	-4.08 m	046° 58' 21.080" N	123° 46' 54.059" W	---
1.22	5519	Dolphin	-3.10 m	046° 58' 15.486" N	123° 46' 51.912" W	---

1.23	5643	Pile	-5.64 m	046° 57' 54.020" N	123° 53' 55.239" W	---
1.24	7004	Dolphin	-5.71 m	046° 58' 13.940" N	123° 52' 42.795" W	---
1.25	7005	Pile	-7.71 m	046° 58' 13.054" N	123° 52' 43.981" W	---
1.26	7006	Pile	-6.70 m	046° 58' 10.992" N	123° 52' 48.172" W	---
1.27	7007	Pile	-6.70 m	046° 58' 09.949" N	123° 52' 56.348" W	---
1.28	7009	Pile	-4.18 m	046° 58' 01.871" N	123° 52' 41.571" W	---
1.29	7010	Dolphin	-4.67 m	046° 58' 01.344" N	123° 52' 32.690" W	---
1.30	7011	Dolphin	-4.17 m	046° 58' 00.772" N	123° 52' 24.371" W	---
1.31	7012	Dolphin	-4.65 m	046° 57' 57.639" N	123° 51' 57.971" W	---
1.32	7013	Dolphin	-4.14 m	046° 57' 55.808" N	123° 51' 49.670" W	---
1.33	7014	Pile	-3.14 m	046° 57' 53.992" N	123° 51' 43.674" W	---
1.34	7015	Pile	-2.93 m	046° 57' 52.848" N	123° 51' 40.679" W	---
1.35	7018	Sounding	-3.61 m	046° 57' 50.163" N	123° 51' 34.128" W	---
1.36	7016	Sounding	-3.22 m	046° 57' 50.817" N	123° 51' 34.458" W	---
1.37	7030	Sounding	-6.30 m	046° 57' 47.608" N	123° 49' 16.347" W	---
1.38	7034	Dolphin	-7.20 m	046° 58' 10.856" N	123° 48' 41.240" W	---
1.39	7035	Dolphin	-3.67 m	046° 58' 14.053" N	123° 48' 34.126" W	---
1.40	7036	Sounding	-7.15 m	046° 58' 19.032" N	123° 48' 31.759" W	---
1.41	7042	Stationary structure, floating or fixed	-7.03 m	046° 58' 19.443" N	123° 48' 31.894" W	---
1.42	7039	Sounding	-7.07 m	046° 58' 20.653" N	123° 48' 35.218" W	---
1.43	7040	Sounding	-7.05 m	046° 58' 20.683" N	123° 48' 34.643" W	---
1.44	7037	Sounding	-7.12 m	046° 58' 20.316" N	123° 48' 30.467" W	---
1.45	7038	Sounding	-7.09 m	046° 58' 21.962" N	123° 48' 33.905" W	---
1.46	7044	Sounding	-5.99 m	046° 58' 20.682" N	123° 48' 19.759" W	---
1.47	7045	Dolphin	-5.92 m	046° 58' 24.300" N	123° 48' 08.186" W	---
1.48	7047	Pile	-3.68 m	046° 57' 38.022" N	123° 46' 30.735" W	---
1.49	7053	Pile	-4.64 m	046° 57' 36.978" N	123° 46' 29.372" W	---
1.50	7048	Pile	-4.67 m	046° 57' 38.590" N	123° 46' 31.674" W	---
1.51	7054	Pile	-4.62 m	046° 57' 39.615" N	123° 46' 32.858" W	---
1.52	7056	Sounding	-1.58 m	046° 57' 28.130" N	123° 46' 16.418" W	---
1.53	7059	Pile	-2.47 m	046° 57' 29.545" N	123° 46' 03.018" W	---
1.54	7060	Pile	-2.46 m	046° 57' 29.723" N	123° 46' 04.612" W	---
1.55	7061	Pile	-2.46 m	046° 57' 30.248" N	123° 46' 07.274" W	---
1.56	7063	Dolphin	-5.43 m	046° 57' 36.415" N	123° 46' 17.633" W	---
1.57	7064	Dolphin	-5.42 m	046° 57' 34.712" N	123° 46' 15.769" W	---
1.58	7062	Pile	6.96 m	046° 57' 37.116" N	123° 46' 18.468" W	---

1.59	7071	Dolphin	-4.11 m	046° 58' 37.394" N	123° 47' 40.171" W	---
1.60	7070	Dolphin	-7.12 m	046° 58' 37.947" N	123° 47' 37.637" W	---
1.61	7073	Dolphin	-5.07 m	046° 58' 34.726" N	123° 47' 54.269" W	---
1.62	7074	Pile	-3.07 m	046° 58' 35.283" N	123° 47' 52.198" W	---
1.63	7076	Pile	-4.04 m	046° 58' 33.233" N	123° 48' 00.922" W	---
1.64	7077	Pile	-4.04 m	046° 58' 33.410" N	123° 48' 00.243" W	---
1.65	7078	Dolphin	-6.00 m	046° 58' 31.046" N	123° 48' 06.975" W	---
1.66	7020	Pile	-0.08 m	046° 57' 48.472" N	123° 51' 29.457" W	---
1.67	7072	Dolphin	3.21 m	046° 58' 36.426" N	123° 47' 46.652" W	---
1.68	7080	Sounding	[None]	046° 58' 08.082" N	123° 53' 07.765" W	---
1.69	7082	Pile	[None]	046° 58' 08.088" N	123° 53' 13.838" W	---
1.70	7083	Pile	[None]	046° 58' 07.631" N	123° 53' 29.846" W	---
1.71	4489	Pile	[None]	046° 57' 35.658" N	123° 46' 22.597" W	---
1.72	0014	SSS	[None]	046° 58' 40.959" N	123° 46' 55.785" W	---
1.73	0015	SSS	[None]	046° 58' 41.553" N	123° 46' 56.871" W	---
1.74	7931	Sounding	[None]	046° 58' 09.294" N	123° 52' 41.826" W	---
1.75	7932	Sounding	[None]	046° 58' 10.551" N	123° 52' 40.226" W	---
1.76	4880	Pile	[None]	046° 58' 02.996" N	123° 51' 38.490" W	---
1.77	957	Sounding	[None]	046° 57' 55.744" N	123° 54' 02.073" W	---
1.78	958	Pile	[None]	046° 57' 55.587" N	123° 54' 09.075" W	---
1.79	6528	Pile	[None]	046° 57' 31.615" N	123° 50' 59.398" W	---
1.80	6529	Pile	[None]	046° 58' 09.864" N	123° 52' 35.570" W	---
1.81	6530	Dolphin	[None]	046° 58' 12.131" N	123° 52' 38.178" W	---
2.1	3436	Sounding	[None]	046° 57' 31.900" N	123° 50' 43.762" W	53090

## **1 - New Features**

## 1.1) Profile/Beam - 4/1 from h11300 / dpones / 2004-083 / 03232004dp

### Survey Summary

**Survey Position:** 046° 57' 39.361" N, 123° 50' 09.098" W  
**Least Depth:** -6.32 m  
**Timestamp:** 2004-083.20:52:04.000 (03/23/2004)  
**DP Dataset:** h11300 / dpones / 2004-083 / 03232004dp  
**Profile/Beam:** 4/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Large mooring dol. Updated position.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-083/03232004dp	4/1	0.00	000.0	Primary
h11300/1212sss/2004-097/sonar_data040406205000	0003	49.24	021.2	Secondary

### Hydrographer Recommendations

Revise position of charted dol at Latitude 46:57:42 Longitude -123:50:7.6. See H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Mooring/warping facility (MORFAC)  
**Attributes:** CATMOR - 1:dolphin  
 CONDTN - 4:wingless  
 HEIGHT - -6.32 m  
 INFORM - Large mooring dol. Updated position.  
 WATLEV - 2:always dry

### Office Notes

*Concur. Add dol symbol in 46°57'39.361"N, 123°50'09.098"W. Delete charted dol symbol in 46°57'40.15"N, 123°50'08.09"W.*

## 1.2) Profile/Beam - 1/1 from h11300 / dpones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 28.135" N, 123° 46' 46.068" W  
**Least Depth:** -3.66 m  
**Timestamp:** 2004-085.18:47:35.000 (03/25/2004)  
**DP Dataset:** h11300 / dpones / 2004-085 / 03252004dp  
**Profile/Beam:** 1/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol, north offshoremost of charted ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-085/03252004dp	1/1	0.00	000.0	Primary
h11300/1212sss/2004-090/sonar_data040330220300	0005	14.86	112.7	Secondary

### Hydrographer Recommendations

Chart Dol, retain ruins as charted.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -3.66 m  
 INFORM - Dol, north offshoremost of charted ruins.

### Office Notes

*Concur. Chart a dolphin in 46°58'28.135"N, 123°46'46.068"W.*

### 1.3) Profile/Beam - 2/1 from h11300 / dpones / 2004-085 / 03252004dp

#### Survey Summary

**Survey Position:** 046° 58' 27.537" N, 123° 46' 45.953" W  
**Least Depth:** -5.68 m  
**Timestamp:** 2004-085.18:50:11.000 (03/25/2004)  
**DP Dataset:** h11300 / dpones / 2004-085 / 03252004dp  
**Profile/Beam:** 2/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol, south offshoremost of charted ruins.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-085/03252004dp	2/1	0.00	000.0	Primary
h11300/1212sss/2004-090/sonar_data040330215500	0005	7.85	010.3	Secondary

#### Hydrographer Recommendations

Chart Dol, retain ruins as charted.

#### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -5.68 m  
 INFORM - Dol, south offshoremost of charted ruins.

#### Office Notes

*Concur. Chart a dolphin in 46°58'27.537"N, 123°46'45.953"W.*



## 1.4) Profile/Beam - 3/1 from h11300 / dpones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 23.357" N, 123° 46' 43.999" W  
**Least Depth:** -1.10 m  
**Timestamp:** 2004-085.19:07:06.000 (03/25/2004)  
**DP Dataset:** h11300 / dpones / 2004-085 / 03252004dp  
**Profile/Beam:** 3/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Disproval charted pile. Not seen on Side Scan Sonar.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-085/03252004dp	3/1	0.00	000.0	Primary

### Hydrographer Recommendations

Delete charted pile; chart pier and bulkhead as shown on H-11300 shoreline updates table.

### S-57 Data

[None]

### Office Notes

*Concur in part. Delete the charted dolphin in 46°58'23.357"N , 123°46'43.999"W. No positional data for the pier and bulkhead was submitted with the present survey. Defer to MCD for disposition of these features.*

## 1.5 Profile/Beam - 4/1 from h11300 / dpones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 22.642" N, 123° 46' 43.943" W  
**Least Depth:** -1.11 m  
**Timestamp:** 2004-085.19:08:47.000 (03/25/2004)  
**DP Dataset:** h11300 / dpones / 2004-085 / 03252004dp  
**Profile/Beam:** 4/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Metal bulkhead--north end. Bulkhead is extension of charted pier. Covers at high water.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-085/03252004dp	4/1	0.00	000.0	Primary
h11300/1212sss/2004-090/sonar_data040330215500	0002	15.83	329.2	Secondary

### Hydrographer Recommendations

Revise charted pier as depicted on H-11300 Shoreline Updates table. Chartist pile

### S-57 Data

**Geo object 1:** Shoreline Construction (SLCONS)  
**Attributes:** CATSLC - 1:breakwater  
 CONDTN - 4:wingless  
 HEIGHT - -1.11 m  
 INFORM - Metal bulkhead--north end. Bulkhead is extension of charted pier. Covers at high water.  
 NATCON - 7:metal  
 STATUS - 1:permanent

## Office Notes

*Concur. Shoreline updates were not submitted with PSS data. Defer to MCD for disposition of charting.*

## 1.6) Profile/Beam - 5/1 from h11300 / dpones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 16.759" N, 123° 46' 41.994" W  
**Least Depth:** -1.17 m  
**Timestamp:** 2004-085.19:16:25.000 (03/25/2004)  
**DP Dataset:** h11300 / dpones / 2004-085 / 03252004dp  
**Profile/Beam:** 5/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Metal bulkhead--south end. Bulkhead is extension of charted pier. Covers at high water.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-085/03252004dp	5/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise charted pier as depicted on H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Shoreline Construction (SLCONS)  
**Attributes:** CATSLC - 1:breakwater  
 CONDTN - 4:wingless  
 HEIGHT - -1.17 m  
 INFORM - Metal bulkhead--south end. Bulkhead is extension of charted pier. Covers at high water.  
 NATCON - 7:metal  
 STATUS - 1:permanent

### Office Notes

*Concur. Shoreline updates were not submitted with PSS data. Defer to MCD for disposition of charting.*

## 1.7) Profile/Beam - 13/1 from h11300 / dpones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 40.178" N, 123° 46' 53.046" W  
**Least Depth:** -4.82 m  
**Timestamp:** 2004-085.21:08:11.000 (03/25/2004)  
**DP Dataset:** h11300 / dpones / 2004-085 / 03252004dp  
**Profile/Beam:** 13/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile--end of row.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-085/03252004dp	13/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart pile

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -4.82 m  
 INFORM - Pile--end of row.

### Office Notes

*Do not concur. Do not chart due to the scale of the chart.*

## 1.8) Profile/Beam - 14/1 from h11300 / dpones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 39.894" N, 123° 46' 53.420" W  
**Least Depth:** -4.33 m  
**Timestamp:** 2004-085.21:09:09.000 (03/25/2004)  
**DP Dataset:** h11300 / dpones / 2004-085 / 03252004dp  
**Profile/Beam:** 14/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile, offshoremost of ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-085/03252004dp	14/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise line of pilings as indicated on H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -4.33 m  
 INFORM - Pile, offshoremost of ruins.

### Office Notes

*Concur. Chart a visible pile symbol in 46°58'39.894"N, 123°46'53.420"W*

## 1.9) Profile/Beam - 15/1 from h11300 / dpones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 42.593" N, 123° 46' 59.217" W  
**Least Depth:** -5.86 m  
**Timestamp:** 2004-085.21:11:56.000 (03/25/2004)  
**DP Dataset:** h11300 / dpones / 2004-085 / 03252004dp  
**Profile/Beam:** 15/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

North pile, offshoremost of ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-085/03252004dp	15/1	0.00	000.0	Primary

### Hydrographer Recommendations

Add line of pilings as indicated on H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -5.86 m  
 INFORM - North pile, offshoremost of ruins.

### Office Notes

*Concur in part. Chart a visible pile symbol in 46°58'42.593"N, 123°46'59.217"W.*

## 1.10) Profile/Beam - 16/1 from h11300 / dpnones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 37.767" N, 123° 47' 06.296" W  
**Least Depth:** -6.88 m  
**Timestamp:** 2004-085.21:14:11.000 (03/25/2004)  
**DP Dataset:** h11300 / dpnones / 2004-085 / 03252004dp  
**Profile/Beam:** 16/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Northwestmost pile of six.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-085/03252004dp	16/1	0.00	000.0	Primary
h11300/1212sss/2004-090/sonar_data040330214600	0001	19.98	288.9	Secondary

### Hydrographer Recommendations

Chart line of piles as indicated on H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -6.88 m  
 INFORM - Northwestmost pile of six.  
 OBJNAM - pile

### Office Notes

*Concur. See Item 1.14 for charting recommendation.*



## 1.11) Profile/Beam - 17/1 from h11300 / dpnones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 37.315" N, 123° 47' 04.911" W  
**Least Depth:** -5.90 m  
**Timestamp:** 2004-085.21:15:52.000 (03/25/2004)  
**DP Dataset:** h11300 / dpnones / 2004-085 / 03252004dp  
**Profile/Beam:** 17/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Mid-section of row of piles

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-085/03252004dp	17/1	0.00	000.0	Primary
h11300/1212sss/2004-090/sonar_data040330214600	0002	4.74	252.4	Secondary

### Hydrographer Recommendations

Chart line of piles as indicated on H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -5.90 m  
 INFORM - Mid-section row of piles  
 OBJNAM - pile

### Office Notes

*Concur. See Item 1.14 for charting recommendation.*

## 1.12) Profile/Beam - 18/1 from h11300 / dpnones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 36.992" N, 123° 47' 03.722" W  
**Least Depth:** -5.91 m  
**Timestamp:** 2004-085.21:17:05.000 (03/25/2004)  
**DP Dataset:** h11300 / dpnones / 2004-085 / 03252004dp  
**Profile/Beam:** 18/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Visible pile.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-085/03252004dp	18/1	0.00	000.0	Primary
h11300/1212sss/2004-090/sonar_data040330214600	0003	9.06	094.8	Secondary

### Hydrographer Recommendations

Chart line of piles as indicated on H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -5.91 m  
 INFORM - Visible pile.  
 OBJNAM - pile

### Office Notes

*Concur. See Item 1.14 for charting recommendation.*

## 1.13) Profile/Beam - 19/1 from h11300 / dpones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 36.438" N, 123° 47' 03.374" W  
**Least Depth:** -3.92 m  
**Timestamp:** 2004-085.21:18:10.000 (03/25/2004)  
**DP Dataset:** h11300 / dpones / 2004-085 / 03252004dp  
**Profile/Beam:** 19/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Visible pile.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-085/03252004dp	19/1	0.00	000.0	Primary
h11300/1212sss/2004-090/sonar_data040330214600	0004	10.25	243.9	Secondary (grouped)
h11300/1212sss/2004-090/sonar_data040330214600	0023	12.80	254.0	Secondary
h11300/1212sss/2004-090/sonar_data040330214600	0005	12.82	259.1	Secondary (grouped)
h11300/1212sss/2004-090/sonar_data040330214600	0024	13.06	248.2	Secondary (grouped)
h11300/1212sss/2004-090/sonar_data040330214600	0022	19.73	225.6	Secondary (grouped)
h11300/1212sss/2004-090/sonar_data040330214600	0006	32.45	315.1	Secondary

### Hydrographer Recommendations

Chart line of piles as indicated on H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -3.92 m  
 INFORM - Visible pile.

OBJNAM - pile

## Office Notes

*Concur. See Item 1.14 for charting recommendation.*

## 1.14) Profile/Beam - 20/1 from h11300 / dpnones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 32.265" N, 123° 46' 59.480" W  
**Least Depth:** -3.45 m  
**Timestamp:** 2004-085.21:20:19.000 (03/25/2004)  
**DP Dataset:** h11300 / dpnones / 2004-085 / 03252004dp  
**Profile/Beam:** 20/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile--marks offshore limit--end of long row.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-085/03252004dp	20/1	0.00	000.0	Primary
h11300/1212sss/2004-090/sonar_data040330214600	0010	9.61	199.4	Secondary

### Hydrographer Recommendations

Chart line of piles as indicated on H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -3.45 m  
 INFORM - Pile--marks offshore limit--end of long row.  
 OBJNAM - pile

### Office Notes

*Concur. Chart a dashed line of piles from 46°58'37.767"N, 123°47'06.296"W to 46°58'32.265"N, 123°46'59.480"W. Add the notation piles.*

## 1.15) Profile/Beam - 21/1 from h11300 / dpnones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 30.439" N, 123° 46' 58.583" W  
**Least Depth:** -5.96 m  
**Timestamp:** 2004-085.21:21:28.000 (03/25/2004)  
**DP Dataset:** h11300 / dpnones / 2004-085 / 03252004dp  
**Profile/Beam:** 21/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile--row of three.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-085/03252004dp	21/1	0.00	000.0	Primary
h11300/1212sss/2004-090/sonar_data040330214600	0021	25.19	197.1	Secondary

### Hydrographer Recommendations

Chart line of piles as indicated on H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -5.96 m  
 INFORM - Pile--row of three.  
 OBJNAM - pile

### Office Notes

*Concur. See item 1.19 for charting recommendation.*

## 1.16) Profile/Beam - 22/1 from h11300 / dpnones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 29.652" N, 123° 46' 57.987" W  
**Least Depth:** -3.00 m  
**Timestamp:** 2004-085.21:25:22.000 (03/25/2004)  
**DP Dataset:** h11300 / dpnones / 2004-085 / 03252004dp  
**Profile/Beam:** 22/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Visible pile--end of long row.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-085/03252004dp	22/1	0.00	000.0	Primary
h11300/1212sss/2004-090/sonar_data040330214600	0013	44.79	306.0	Secondary

### Hydrographer Recommendations

Chart line of piles as indicated on H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -3.00 m  
 INFORM - Visible pile--end of long row.  
 OBJNAM - pile

### Office Notes

*Concur. See item 1.19 for charting recommendation.*

## 1.17) Profile/Beam - 23/1 from h11300 / dpnones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 29.634" N, 123° 46' 57.298" W  
**Least Depth:** -6.00 m  
**Timestamp:** 2004-085.21:26:12.000 (03/25/2004)  
**DP Dataset:** h11300 / dpnones / 2004-085 / 03252004dp  
**Profile/Beam:** 23/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Visible pile.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-085/03252004dp	23/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise pile and row of ruins as depicted on Shoreline Updates Table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -6.00 m  
 INFORM - Visible dol.  
 OBJNAM - pile

### Office Notes

*Concur. See item 1.19 for charting recommendation.*



## 1.18) Profile/Beam - 24/1 from h11300 / dpnones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 27.394" N, 123° 46' 55.763" W  
**Least Depth:** -3.53 m  
**Timestamp:** 2004-085.21:29:56.000 (03/25/2004)  
**DP Dataset:** h11300 / dpnones / 2004-085 / 03252004dp  
**Profile/Beam:** 24/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Visible dol.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-085/03252004dp	24/1	0.00	000.0	Primary
h11300/1212sss/2004-090/sonar_data040330214600	0015	14.15	175.9	Secondary

### Hydrographer Recommendations

Revise dol and row of ruins as depicted on Shoreline Updates Table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -3.53 m  
 INFORM - Visible dol.  
 OBJNAM - dol

### Office Notes

*Do not concur. The dolphin is presently charted. Retain the charted dolphin in 46°58'27.53"N , 123°46'55.45"W and the notation piles.*

## 1.19) Profile/Beam - 25/1 from h11300 / dpones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 28.708" N, 123° 46' 56.907" W  
**Least Depth:** -6.04 m  
**Timestamp:** 2004-085.21:31:16.000 (03/25/2004)  
**DP Dataset:** h11300 / dpones / 2004-085 / 03252004dp  
**Profile/Beam:** 25/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Visible pile.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-085/03252004dp	25/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise pile and row of ruins as depicted on Shoreline Updates Table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -6.04 m  
 INFORM - Visible dol.  
 OBJNAM - pile

### Office Notes

*Concur. Chart a dashed line of piles from 46°58'30.439"N, 123°46'58.583"W to 46°58'27.53"N, 123°46'55.45"W. Add the notation Piles.*

## 1.20) Profile/Beam - 26/1 from h11300 / dpnones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 22.348" N, 123° 46' 53.415" W  
**Least Depth:** -6.06 m  
**Timestamp:** 2004-085.21:33:11.000 (03/25/2004)  
**DP Dataset:** h11300 / dpnones / 2004-085 / 03252004dp  
**Profile/Beam:** 26/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol--offshoremost of row into shore.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-085/03252004dp	26/1	0.00	000.0	Primary
h11300/1212sss/2004-103/sonar_data040412191200	0007	25.85	209.3	Secondary

### Hydrographer Recommendations

Revise dol and row of ruins as depicted on Shoreline Updates Table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -6.06 m  
 INFORM - Dol--offshoremost of row into shore.  
 OBJNAM - dol

### Office Notes

*Do not concur. Retain dolphin as charted in 46°58'22.348"N , 123°46'53.415"W.*

## 1.21) Profile/Beam - 27/1 from h11300 / dpnones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 21.080" N, 123° 46' 54.059" W  
**Least Depth:** -4.08 m  
**Timestamp:** 2004-085.21:35:34.000 (03/25/2004)  
**DP Dataset:** h11300 / dpnones / 2004-085 / 03252004dp  
**Profile/Beam:** 27/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

pile in ruins--inside corner.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-085/03252004dp	27/1	0.00	000.0	Primary
h11300/1212sss/2004-090/sonar_data040330214600	0019	37.58	269.2	Secondary (grouped)

### Hydrographer Recommendations

Revise pile and row of ruins as depicted on Shoreline Updates Table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -4.08 m  
 INFORM - Dol in ruins--inside corner.  
 OBJNAM - pile

### Office Notes

*Do not concur. Presently charted as ruins. No change in charting is recommended.*

## 1.22) Profile/Beam - 28/1 from h11300 / dpnones / 2004-085 / 03252004dp

### Survey Summary

**Survey Position:** 046° 58' 15.486" N, 123° 46' 51.912" W  
**Least Depth:** -3.10 m  
**Timestamp:** 2004-085.21:37:26.000 (03/25/2004)  
**DP Dataset:** h11300 / dpnones / 2004-085 / 03252004dp  
**Profile/Beam:** 28/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

South end row of piles.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-085/03252004dp	28/1	0.00	000.0	Primary
h11300/1212sss/2004-103/sonar_data040412191200	0004	32.15	223.7	Secondary

### Hydrographer Recommendations

Revise pile and row of ruins as depicted on Shoreline Updates Table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -3.10 m  
 INFORM - South end row of dols.  
 OBJNAM - pile

### Office Notes

*Do not concur. Presently charted as ruins. No change in charting is recommended.*

## 1.23) Profile/Beam - 1/1 from h11300 / dpones / 2004-089 / 03292004dp

### Survey Summary

**Survey Position:** 046° 57' 54.020" N, 123° 53' 55.239" W  
**Least Depth:** -5.64 m  
**Timestamp:** 2004-089.18:10:42.000 (03/29/2004)  
**DP Dataset:** h11300 / dpones / 2004-089 / 03292004dp  
**Profile/Beam:** 1/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile in ruins, 150m southeast of charted pile not seen.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-089/03292004dp	1/1	0.00	000.0	Primary

### Hydrographer Recommendations

Delete charted pile; extend charted foul area to pile location; chart new pile as indicated on H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -5.64 m  
 INFORM - Pile in ruins, 150m southeast of charted pile not seen.

### Office Notes

*Concur in part. Add visible pile symbol in 46°57'54.020"N, 123°53'55.239"W.*

## 1.24) Profile/Beam - 1/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 13.940" N, 123° 52' 42.795" W  
**Least Depth:** -5.71 m  
**Timestamp:** 2004-104.15:58:53.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 1/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol ruins

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	1/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new dol in ruins

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -5.71 m  
 INFORM - Dol ruins

### Office Notes

*Concur. Add visible dolphin symbol in 46°58'13.940"N , 123°52'42.795"W.*

## 1.25) Profile/Beam - 2/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 13.054" N, 123° 52' 43.981" W  
**Least Depth:** -7.71 m  
**Timestamp:** 2004-104.16:00:07.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 2/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	2/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new pile in ruins

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -7.71 m  
 INFORM - Pile ruins.

### Office Notes

*Concur. Add visible pile symbol in 46°58'13.054"N, 123°52'43.981"W.*



## 1.26) Profile/Beam - 3/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 10.992" N, 123° 52' 48.172" W  
**Least Depth:** -6.70 m  
**Timestamp:** 2004-104.16:01:52.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 3/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile, west end row of 4.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	3/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new pile in ruins

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -6.70 m  
 INFORM - Pile, west end row of 4.

### Office Notes

*Concur. Add visible pile symbol in 46°58'10.992"N, 123°52'48.172"W.*

## 1.27) Profile/Beam - 4/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 09.949" N, 123° 52' 56.348" W  
**Least Depth:** -6.70 m  
**Timestamp:** 2004-104.16:03:52.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 4/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	4/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new pile in ruins.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -6.70 m  
 INFORM - Pile ruins.

### Office Notes

*Concur. Add visible pile symbol in 46°58'09.949"N, 123°52'56.348"W.*

## 1.28) Profile/Beam - 6/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 01.871" N, 123° 52' 41.571" W  
**Least Depth:** -4.18 m  
**Timestamp:** 2004-104.16:09:03.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 6/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	6/1	0.00	000.0	Primary
h11300/1212sss/2004-096/sonar_data040405173900	0003	8.51	273.1	Secondary (grouped)
h11300/1212sss/2004-096/sonar_data040405183300	0003	16.78	267.0	Secondary (grouped)

### Hydrographer Recommendations

Chart new pile in ruins

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -4.18 m  
 INFORM - Pile ruins.

### Office Notes

*Concur. Chart a visible pile symbol in 46°58'01.871"N , 123°52'41.571"W.*

## 1.29) Profile/Beam - 7/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 01.344" N, 123° 52' 32.690" W  
**Least Depth:** -4.67 m  
**Timestamp:** 2004-104.16:11:17.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 7/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol ruins

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	7/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new dol in ruins

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -4.67 m  
 INFORM - Dol ruins

### Office Notes

*Concur. Chart a dolphin symbol in 46°58'01.344"N, 123°52'32.690"W.*

### 1.30) Profile/Beam - 8/1 from h11300 / dpones / 2004-104 / 04132004dp

#### Survey Summary

**Survey Position:** 046° 58' 00.772" N, 123° 52' 24.371" W  
**Least Depth:** -4.17 m  
**Timestamp:** 2004-104.16:13:26.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 8/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol ruins

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	8/1	0.00	000.0	Primary

#### Hydrographer Recommendations

Chart new dol in ruins

#### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -4.17 m  
 INFORM - Dol ruins

#### Office Notes

*Concur. Chart a dolphin symbol in 46°58'00.772"N, 123°52'24.371"W.*

## 1.31) Profile/Beam - 9/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 57.639" N, 123° 51' 57.971" W  
**Least Depth:** -4.65 m  
**Timestamp:** 2004-104.16:17:40.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 9/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol offshore of charted ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	9/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new dol. See H-11300 shoreline update table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** OBJNAM - dol

### Office Notes

*Concur. Chart a dolphin symbol in 46°57'57.639"N, 123°51'57.971"W.*

## 1.32) Profile/Beam - 10/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 55.808" N, 123° 51' 49.670" W  
**Least Depth:** -4.14 m  
**Timestamp:** 2004-104.16:19:31.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 10/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol in ruins marking offshore limit of shoal.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	10/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise line of pilings as indicated on H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -4.14 m  
 INFORM - Dol in ruins marking offshore limit of shoal.

### Office Notes

*Concur with clarification. Chart a dolphin symbol in 46°57'55.808"N , 123°51'49.670"W.*

### 1.33) Profile/Beam - 11/1 from h11300 / dpnones / 2004-104 / 04132004dp

#### Survey Summary

**Survey Position:** 046° 57' 53.992" N, 123° 51' 43.674" W  
**Least Depth:** -3.14 m  
**Timestamp:** 2004-104.16:20:59.000 (04/13/2004)  
**DP Dataset:** h11300 / dpnones / 2004-104 / 04132004dp  
**Profile/Beam:** 11/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile marks offshore limit of shoal.

#### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-104/04132004dp	11/1	0.00	000.0	Primary

#### Hydrographer Recommendations

Chart new pile. Revise position of pilings at Latitude 46:57:51 Longitude -123:51:43. See H-11300 Shoreline Updates table.

#### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -3.14 m  
 INFORM - Pile marks offshore limit of shoal.  
 OBJNAM - pile

#### Office Notes

*Concur with clarification. Chart a pile symbol in 46°57'53.992"N, 123°51'43.674"W. Delete the charted pile in 46°57'51.92"N, 123°51'43.26"W.*



## 1.34) Profile/Beam - 12/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 52.848" N, 123° 51' 40.679" W  
**Least Depth:** -2.93 m  
**Timestamp:** 2004-104.16:22:27.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 12/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile marks offshore limit of shoal.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	12/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new pile. Revise position of pilings at Latitude 46:57:51 Longitude -123:51:43. See H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -2.93 m  
 INFORM - Pile marks offshore limit of shoal.

### Office Notes

*Concur with clarification. Chart a pile symbol in 46°57'52.848"N , 123°51'40.679"W. Delete the charted pile in 46°57'50.47"N , 123°51'40.05"W.*

## 1.35) Profile/Beam - 15/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 50.163" N, 123° 51' 34.128" W  
**Least Depth:** -3.61 m  
**Timestamp:** 2004-104.16:28:07.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 15/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

End of easternmost of two pile dikes.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	15/1	0.00	000.0	Primary

### Hydrographer Recommendations

Extend pile dikes as shown on H11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Shoreline Construction (SLCONS)  
**Attributes:** CATSLC - 2:groyne (groin)  
 CONDTN - 2:ruined  
 HEIGHT - -3.61 m  
 INFORM - End of easternmost of two pile dikes.  
 NATCON - 6:wooden  
 STATUS - 13:historic

### Office Notes

*Concur. Add a row of piles in 46°57'50.163"N, 123°51'34.128"W.*

## 1.36) Profile/Beam - 13/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 50.817" N, 123° 51' 34.458" W  
**Least Depth:** -3.22 m  
**Timestamp:** 2004-104.16:24:44.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 13/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

End of westernmost of two pile dikes.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	13/1	0.00	000.0	Primary

### Hydrographer Recommendations

Extend and revise pile dikes at Latitude 46:57:50 Longitude -123:51:35 as indicated on H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Shoreline Construction (SLCONS)  
**Attributes:** CATSLC - 2:groyne (groin)  
 CONDTN - 2:ruined  
 HEIGHT - -3.22 m  
 INFORM - End of westernmost of two pile dikes.  
 NATCON - 6:wooden  
 STATUS - 13:historic

### Office Notes

*Concur. Add a pile symbol at the end of charted ruins in 46°57'50.817"N , 123°51'34.458"W.*

## 1.37) Profile/Beam - 17/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 47.608" N, 123° 49' 16.347" W  
**Least Depth:** -6.30 m  
**Timestamp:** 2004-104.17:24:05.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 17/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Offshoremost pile of numerous charted piles and dols.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	17/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise charted row of dols.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** INFORM - Offshoremost pile of numerous charted piles and dols.

### Office Notes

*Do not concur. Retain the row of piles as charted in the vicinity of 46°57'43.23"N, 123°49'13.76"W as shown on chart 18502, 85th edition.*

## 1.38) Profile/Beam - 20/1 from h11300 / dpnones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 10.856" N, 123° 48' 41.240" W  
**Least Depth:** -7.20 m  
**Timestamp:** 2004-104.17:39:44.000 (04/13/2004)  
**DP Dataset:** h11300 / dpnones / 2004-104 / 04132004dp  
**Profile/Beam:** 20/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-104/04132004dp	20/1	0.00	000.0	Primary
h11300/1212sss/2004-097/sonar_data040406212500	0003	31.00	065.6	Secondary

### Hydrographer Recommendations

Chart new dol in ruins

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -7.20 m  
 INFORM - Dol ruins.

### Office Notes

*Concur. Chart a dolphin symbol in 46°58'10.856"N, 123°48'41.240"W.*

## 1.39) Profile/Beam - 21/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 14.053" N, 123° 48' 34.126" W  
**Least Depth:** -3.67 m  
**Timestamp:** 2004-104.17:42:44.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 21/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	21/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new dol in ruins.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -3.67 m  
 INFORM - Dol ruins.  
 OBJNAM - Dolphin

### Office Notes

*Concur. Chart a dolphin symbol in 46°58'14.053"N, 123°48'34.126"W.*

## 1.40) Profile/Beam - 22/1 from h11300 / dpnones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 19.032" N, 123° 48' 31.759" W  
**Least Depth:** -7.15 m  
**Timestamp:** 2004-104.17:45:48.000 (04/13/2004)  
**DP Dataset:** h11300 / dpnones / 2004-104 / 04132004dp  
**Profile/Beam:** 22/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Southwest bridge fender--red light

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-104/04132004dp	22/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise position of bridge fender. See H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pylon/bridge support (PYLONS)  
**Attributes:** CATPYL - 4:bridge pylon/tower  
 HEIGHT - -7.15 m  
 INFORM - Southwest bridge fender--red light  
 WATLEV - 1:partly submerged at high water

### Office Notes

*Concur. Defer to MCD for charting disposition.*

## 1.41) Profile/Beam - 27/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 19.443" N, 123° 48' 31.894" W  
**Least Depth:** -7.03 m  
**Timestamp:** 2004-104.18:02:37.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 27/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

South fender--inside west corner.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	27/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise position of bridge at Latitude 46:58:19 Longitude -123:48:31. See H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pylon/bridge support (PYLONS)  
**Attributes:** CATPYL - 4:bridge pylon/tower  
 HEIGHT - -7.03 m  
 INFORM - South fender--inside west corner.  
 WATLEV - 1:partly submerged at high water

### Office Notes

*Concur. Defer to MCD for charting disposition.*



## 1.42) Profile/Beam - 25/1 from h11300 / dpnones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 20.653" N, 123° 48' 35.218" W  
**Least Depth:** -7.07 m  
**Timestamp:** 2004-104.17:55:57.000 (04/13/2004)  
**DP Dataset:** h11300 / dpnones / 2004-104 / 04132004dp  
**Profile/Beam:** 25/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Westernmost end of bridge fender--red light.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-104/04132004dp	25/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise position of bridge fender. See H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pylon/bridge support (PYLONS)  
**Attributes:** CATPYL - 4:bridge pylon/tower  
 HEIGHT - -7.07 m  
 INFORM - Westernmost end of bridge fender--red light.  
 WATLEV - 1:partly submerged at high water

### Office Notes

*Concur. Defer to MCD for charting disposition.*

## 1.43) Profile/Beam - 26/1 from h11300 / dpnones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 20.683" N, 123° 48' 34.643" W  
**Least Depth:** -7.05 m  
**Timestamp:** 2004-104.17:58:24.000 (04/13/2004)  
**DP Dataset:** h11300 / dpnones / 2004-104 / 04132004dp  
**Profile/Beam:** 26/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

West end of bridge fender--inside west corner.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-104/04132004dp	26/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise position of bridge at Latitude 46:58:21 Longitude -123:48:34. See H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pylon/bridge support (PYLONS)  
**Attributes:** CATPYL - 4:bridge pylon/tower  
 HEIGHT - -7.05 m  
 INFORM - West end of bridge fender--inside west corner.  
 WATLEV - 1:partly submerged at high water

### Office Notes

*Concur. Defer to MCD for charting disposition.*

## 1.44) Profile/Beam - 23/1 from h11300 / dpnones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 20.316" N, 123° 48' 30.467" W  
**Least Depth:** -7.12 m  
**Timestamp:** 2004-104.17:50:22.000 (04/13/2004)  
**DP Dataset:** h11300 / dpnones / 2004-104 / 04132004dp  
**Profile/Beam:** 23/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Southeast end of bridge fender--red light.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-104/04132004dp	23/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise position of bridge at Latitude 46:58:21 Longitude -123:48:30. See H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pylon/bridge support (PYLONS)  
**Attributes:** CATPYL - 4:bridge pylon/tower  
 HEIGHT - -7.12 m  
 INFORM - Southeast end of bridge fender--red light.  
 WATLEV - 1:partly submerged at high water

### Office Notes

*Concur. Defer to MCD for charting disposition.*

## 1.45) Profile/Beam - 24/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 21.962" N, 123° 48' 33.905" W  
**Least Depth:** -7.09 m  
**Timestamp:** 2004-104.17:53:08.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 24/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

North end of bridge fender--red light.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	24/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise east point position of bridge at Latitude 46:58:22 Longitude -123:48:33. See H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pylon/bridge support (PYLONS)  
**Attributes:** CATPYL - 4:bridge pylon/tower  
 HEIGHT - -7.09 m  
 INFORM - North end of bridge fender--red light.  
 WATLEV - 1:partly submerged at high water

### Office Notes

*Concur. Defer to MCD for charting disposition.*

## 1.46) Profile/Beam - 28/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 20.682" N, 123° 48' 19.759" W  
**Least Depth:** -5.99 m  
**Timestamp:** 2004-104.18:07:00.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 28/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Charted structure is now pile ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	28/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart pile ruins as shown on Shoreline Updates table.

### S-57 Data

**Geo object 1:** Shoreline Construction (SLCONS)  
**Attributes:** CONDTN - 2:ruined  
 INFORM - Charted structure is now pile ruins.  
 OBJNAM - Ruins  
 STATUS - 1:permanent

### Office Notes

*Concur. Defer to MCD for disposition of charting.*

## 1.47) Profile/Beam - 29/1 from h11300 / dpnones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 24.300" N, 123° 48' 08.186" W  
**Least Depth:** -5.92 m  
**Timestamp:** 2004-104.18:17:18.000 (04/13/2004)  
**DP Dataset:** h11300 / dpnones / 2004-104 / 04132004dp  
**Profile/Beam:** 29/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-104/04132004dp	29/1	0.00	000.0	Primary
h11300/1212sss/2004-097/sonar_data040406211300	0006	37.60	096.2	Secondary (grouped)

### Hydrographer Recommendations

Chart new dol in ruins

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -5.92 m  
 INFORM - Dol ruins.

### Office Notes

*Concur. Chart a visible dolphin symbol in 46°58'24.300"N, 123°48'08.186"W. The charted Pier centered in 46°58'23.47"N, 123°48'08.39"W is no longer visible. It is recommended that the charted pier be revised to a submerged pier in ruins*

## 1.48) Profile/Beam - 30/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 38.022" N, 123° 46' 30.735" W  
**Least Depth:** -3.68 m  
**Timestamp:** 2004-104.18:48:21.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 30/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Ruins end south of entrance to small stream.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	30/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise shoreline further inshore. Chart ruins.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -3.68 m  
 INFORM - Ruins end south of entrance to small stream.

### Office Notes

*Shoreline in the vicinity has changed. Defer to MCD for disposition of charting.*

## 1.49) Profile/Beam - 32/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 36.978" N, 123° 46' 29.372" W  
**Least Depth:** -4.64 m  
**Timestamp:** 2004-104.18:52:31.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 32/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

North end of pile ruins--south of entrance to small stream.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	32/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise shoreline further inshore and chart ruins. See H-11300 shoreline updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -4.64 m  
 INFORM - North end of pile ruins--south of entrance to small stream.

### Office Notes

*Shoreline in the vicinity has changed. Defer to MCD for disposition of charting.*



## 1.50) Profile/Beam - 31/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 38.590" N, 123° 46' 31.674" W  
**Least Depth:** -4.67 m  
**Timestamp:** 2004-104.18:49:26.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 31/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

South end of pile ruins--north of entrance to small stream.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	31/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise shoreline further inshore and chart ruins. See H-11300 shoreline updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -4.67 m  
 INFORM - South end of pile ruins--north of entrance to small stream.

### Office Notes

*Shoreline in the vicinity has changed. Defer to MCD for disposition of charting.*

## 1.51) Profile/Beam - 33/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 39.615" N, 123° 46' 32.858" W  
**Least Depth:** -4.62 m  
**Timestamp:** 2004-104.18:54:31.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 33/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

North end of pile ruins--north of entrance to small stream.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	33/1	0.00	000.0	Primary

### Hydrographer Recommendations

Revise shoreline further inshore and chart ruins. See H-11300 shoreline updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -4.62 m  
 INFORM - North end of pile ruins--north of entrance to small stream.

### Office Notes

*Shoreline in the vicinity has changed. Defer to MCD for disposition of charting.*

## 1.52) Profile/Beam - 34/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 28.130" N, 123° 46' 16.418" W  
**Least Depth:** -1.58 m  
**Timestamp:** 2004-104.18:58:58.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 34/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Ramp

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	34/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new launch ramp.

### S-57 Data

**Geo object 1:** Shoreline Construction (SLCONS)  
**Attributes:** CATSLC - 12:ramp  
 INFORM - Ramp  
 NATCON - 2:concreted  
 STATUS - 1:permanent

### Office Notes

*Shoreline in the vicinity has changed. Defer to MCD for disposition of charting.*

## 1.53) Profile/Beam - 35/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 29.545" N, 123° 46' 03.018" W  
**Least Depth:** -2.47 m  
**Timestamp:** 2004-104.19:11:37.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 35/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

East end of dol row.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	35/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart row of pile ruins as depicted on H-11300 shoreline updates table

#### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -2.47 m  
 INFORM - East end of dol row.

### Office Notes

*Concur in part. Due to the scale of the chart, add a pile symbol in 46°57'29.545"N, 123°46'03.018"W to indicate the east end of a row of piles.*

## 1.54) Profile/Beam - 36/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 29.723" N, 123° 46' 04.612" W  
**Least Depth:** -2.46 m  
**Timestamp:** 2004-104.19:12:46.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 36/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Mid-section of dolphin row.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	36/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart row of pile ruins as depicted on H-11300 shoreline updates table

#### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -2.46 m  
 INFORM - Mid-section of dolphin row.

### Office Notes

*Concur in part. Due to the scale of the chart, add a pile symbol in 46°57'29.723"N , 123°46'04.612"W to indicate the mid section of a row of piles.*

## 1.55) Profile/Beam - 37/1 from h11300 / dpnones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 30.248" N, 123° 46' 07.274" W  
**Least Depth:** -2.46 m  
**Timestamp:** 2004-104.19:13:35.000 (04/13/2004)  
**DP Dataset:** h11300 / dpnones / 2004-104 / 04132004dp  
**Profile/Beam:** 37/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Western end of dolphin row.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-104/04132004dp	37/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart row of pile ruins as depicted on H-11300 shoreline updates table

#### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -2.46 m  
 INFORM - Western end of dolphin row.

### Office Notes

*The charted pile in 46°57'30.43"N, 123°46'08.17"W was verified by the hydrographer as the western end of a row of piles. It is recommended that the pile be retained as charted.*

## 1.56) Profile/Beam - 39/1 from h11300 / dpnones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 36.415" N, 123° 46' 17.633" W  
**Least Depth:** -5.43 m  
**Timestamp:** 2004-104.19:16:44.000 (04/13/2004)  
**DP Dataset:** h11300 / dpnones / 2004-104 / 04132004dp  
**Profile/Beam:** 39/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-104/04132004dp	39/1	0.00	000.0	Primary
h11300/1212sss/2004-097/sonar_data040406183500	0005	16.17	009.2	Secondary (grouped)

### Hydrographer Recommendations

??? Unsure how feature is currently charted.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -5.43 m  
 INFORM - Pile ruins.

### Office Notes

*Chart a Dolphin symbol in 46°57'36.415"N , 123°46'17.633"W.*

## 1.57) Profile/Beam - 40/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 34.712" N, 123° 46' 15.769" W  
**Least Depth:** -5.42 m  
**Timestamp:** 2004-104.19:17:41.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 40/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	40/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new dol in ruins.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -5.42 m  
 INFORM - Dol ruins.

### Office Notes

*Concur. Add a dolphin symbol in 46°57'34.712"N, 123°46'15.769"W.*



## 1.58) Profile/Beam - 38/1 from h11300 / dpnones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 37.116" N, 123° 46' 18.468" W  
**Least Depth:** 6.96 m  
**Timestamp:** 2004-104.19:15:55.000 (04/13/2004)  
**DP Dataset:** h11300 / dpnones / 2004-104 / 04132004dp  
**Profile/Beam:** 38/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Visible pile.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-104/04132004dp	38/1	0.00	000.0	Primary
h11300/1212sss/2004-097/sonar_data040406180700	0004	27.77	118.0	Secondary (grouped)

### Hydrographer Recommendations

Chart pile.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONVIS - 1:visual conspicuous  
 INFORM - Visible pile.

### Office Notes

*Concur. Chart a visible pile in 46°57'37.116"N, 123°46'18.468"W.*

## 1.59) Profile/Beam - 42/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 37.394" N, 123° 47' 40.171" W  
**Least Depth:** -4.11 m  
**Timestamp:** 2004-104.19:53:38.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 42/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Center of 3 dols.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	42/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new dol in ruins

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -4.11 m  
 INFORM - Center of 3 dols.

### Office Notes

*Concur. Chart a dolphin symbol in 46°58'37.394"N, 123°47'40.171"W.*

## 1.60) Profile/Beam - 41/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 37.947" N, 123° 47' 37.637" W  
**Least Depth:** -7.12 m  
**Timestamp:** 2004-104.19:52:45.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 41/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

East end of Dol ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	41/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new dol in ruins

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -7.12 m  
 INFORM - East end of Dol ruins.

### Office Notes

*Concur. Chart a visible dolphin in 46°58'37.947"N, 123°47'37.637"W.*

## 1.61) Profile/Beam - 43/1 from h11300 / dpnones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 34.726" N, 123° 47' 54.269" W  
**Least Depth:** -5.07 m  
**Timestamp:** 2004-104.19:58:56.000 (04/13/2004)  
**DP Dataset:** h11300 / dpnones / 2004-104 / 04132004dp  
**Profile/Beam:** 43/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-104/04132004dp	43/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new dol in ruins

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -5.07 m  
 INFORM - Dol ruins.

### Office Notes

*Concur. Chart a visible dolphin in 46°58'34.726"N, 123°47'54.269"W.*

## 1.62) Profile/Beam - 44/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 35.283" N, 123° 47' 52.198" W  
**Least Depth:** -3.07 m  
**Timestamp:** 2004-104.19:59:40.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 44/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	44/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new pile in ruins

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -3.07 m  
 INFORM - Pile ruins.

### Office Notes

*Concur. Add a pile symbol in 46°58'35.283"N, 123°47'52.198"W.*

## 1.63) Profile/Beam - 45/1 from h11300 / dpnones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 33.233" N, 123° 48' 00.922" W  
**Least Depth:** -4.04 m  
**Timestamp:** 2004-104.20:02:16.000 (04/13/2004)  
**DP Dataset:** h11300 / dpnones / 2004-104 / 04132004dp  
**Profile/Beam:** 45/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

pile ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpnones/2004-104/04132004dp	45/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new Pile in ruins

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -4.04 m  
 INFORM - Pile ruins.

### Office Notes

*Concur. Chart a visible pile in 46°58'33.233"N, 123°48'00.922"W.*

## 1.64) Profile/Beam - 46/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 33.410" N, 123° 48' 00.243" W  
**Least Depth:** -4.04 m  
**Timestamp:** 2004-104.20:02:31.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 46/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	46/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new Pile in ruins.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -4.04 m  
 INFORM - Pile ruins.  
 OBJNAM - Pile

### Office Notes

*Concur. Chart a visible pile in 46°58'33.410"N, 123°48'00.243"W.*

## 1.65) Profile/Beam - 47/1 from h11300 / dpones / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 31.046" N, 123° 48' 06.975" W  
**Least Depth:** -6.00 m  
**Timestamp:** 2004-104.20:06:56.000 (04/13/2004)  
**DP Dataset:** h11300 / dpones / 2004-104 / 04132004dp  
**Profile/Beam:** 47/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol and pile cluster ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dpones/2004-104/04132004dp	47/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new cluster ruins

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 4:tripodal  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 HEIGHT - -6.00 m  
 INFORM - Dol and pile cluster ruins.

### Office Notes

*Concur. Chart a visible dolphin in 46°58'31.046"N, 123°48'06.975"W.*



## 1.66) Profile/Beam - 1/1 from h11300 / dp es / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 57' 48.472" N, 123° 51' 29.457" W  
**Least Depth:** -0.08 m  
**Timestamp:** 2004-104.16:34:58.000 (04/13/2004)  
**DP Dataset:** h11300 / dp es / 2004-104 / 04132004dp  
**Profile/Beam:** 1/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Disproval DP--not seen on echosounder or 200% side scan imagery.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dp es/2004-104/04132004dp	1/1	0.00	000.0	Primary

### Hydrographer Recommendations

Remove charted pile.

### S-57 Data

**Geo object 1:** Pile (PILPNT)

### Office Notes

*Concur. Delete charted pile in 46°57'48.472"N , 123°51'29.457"W.*

## 1.67) Profile/Beam - 4/1 from h11300 / dp es / 2004-104 / 04132004dp

### Survey Summary

**Survey Position:** 046° 58' 36.426" N, 123° 47' 46.652" W  
**Least Depth:** 3.21 m  
**Timestamp:** 2004-104.19:56:03.000 (04/13/2004)  
**DP Dataset:** h11300 / dp es / 2004-104 / 04132004dp  
**Profile/Beam:** 4/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Delete charted dol not found on 200% SSS. Charted dol is near a shoreline postioned pier that was found via SSS 200%.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/dp es/2004-104/04132004dp	4/1	0.00	000.0	Primary

### Hydrographer Recommendations

Delete charted dol.

### S-57 Data

**Geo object 1:** Pile (PILPNT)

### Office Notes

*Concur. Delete charted Dolphin in 46°58'36.426"N, 123°47'46.652"W.*

## 1.68) Profile/Beam - 1/1 from h11300 / 1212dpones / 2004-106 / 041504dp

### Survey Summary

**Survey Position:** 046° 58' 08.082" N, 123° 53' 07.765" W  
**Least Depth:** [None]  
**Timestamp:** 2004-106.15:42:08.000 (04/15/2004)  
**DP Dataset:** h11300 / 1212dpones / 2004-106 / 041504dp  
**Profile/Beam:** 1/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Disproval of charted dol--not found on echosounder or 200% side scan imagery.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/1212dpones/2004-106/041504dp	1/1	0.00	000.0	Primary

### Hydrographer Recommendations

Delete charted dol.

### S-57 Data

**Geo object 1:** Pile (PILPNT)

### Office Notes

*Concur. Delete charted Dolphin in 46°58'08.082"N, 123°53'07.765"W.*

## 1.69) Profile/Beam - 2/1 from h11300 / 1212dpones / 2004-106 / 041504dp

### Survey Summary

**Survey Position:** 046° 58' 08.088" N, 123° 53' 13.838" W  
**Least Depth:** [None]  
**Timestamp:** 2004-106.15:43:52.000 (04/15/2004)  
**DP Dataset:** h11300 / 1212dpones / 2004-106 / 041504dp  
**Profile/Beam:** 2/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

East starting end of ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/1212dpones/2004-106/041504dp	2/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new ruins.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 OBJNAM - piles in ruin  
**Geo object 2:** Shoreline Construction (SLCONS)  
**Attributes:** CATSLC - 6:wharf (quay)  
 CONDTN - 2:ruined  
 INFORM - East starting end of ruins.  
 NATCON - 6:wooden  
 STATUS - 13:historic

## Office Notes

*Concur. Add row of piles in ruin from 46°58'08.088"N, 123°53'13.838"W to 46°58'07.631"N, 123°53'29.846"W.*

## 1.70) Profile/Beam - 3/1 from h11300 / 1212dpones / 2004-106 / 041504dp

### Survey Summary

**Survey Position:** 046° 58' 07.631" N, 123° 53' 29.846" W  
**Least Depth:** [None]  
**Timestamp:** 2004-106.15:46:20.000 (04/15/2004)  
**DP Dataset:** h11300 / 1212dpones / 2004-106 / 041504dp  
**Profile/Beam:** 3/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

West ending edge of ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/1212dpones/2004-106/041504dp	3/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new ruins. See H-11300 Shoreline Updates table.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 OBJNAM - pile ruins

### Office Notes

*The hydrographer verified the last charted pile in a row of pile ruins in 46°58'07.631"N , 123°53'29.846"W. Retain the pile as charted.*

## 1.71) Profile/Beam - 1/1 from h11300 / unassigned / 2004-315 / 111004\_315dp

### Survey Summary

**Survey Position:** 046° 57' 35.658" N, 123° 46' 22.597" W  
**Least Depth:** [None]  
**Timestamp:** 2004-315.20:09:44.000 (11/10/2004)  
**DP Dataset:** h11300 / unassigned / 2004-315 / 111004\_315dp  
**Profile/Beam:** 1/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Disproval charted pile--not found on echosounder or 200% side scan imagery.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/unassigned/2004-315/111004_315dp	1/1	0.00	000.0	Primary

### Hydrographer Recommendations

Delete charted pile.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** INFORM - not found  
 OBJNAM - pile

### Office Notes

*Concur. Delete charted pile in 46°57'35.658"N, 123°46'22.597"W.*

## 1.72) Contact/Point - 0014/1 from h11300 / 1212sss / 2004-090 / sonar\_data040330215500

### Survey Summary

**Survey Position:** 046° 58' 40.959" N, 123° 46' 55.785" W  
**Least Depth:** [None]  
**Timestamp:** 2004-092.12:02:47 (04/01/2004)  
**Survey Line:** h11300 / 1212sss / 2004-090 / sonar\_data040330215500  
**Contact/Point:** 0014/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

dol

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/1212sss/2004-090/sonar_data040330215500	0014	0.00	000.0	Primary

### Hydrographer Recommendations

[None]

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 OBJNAM - pile

### Office Notes

*Chart a visible pile symbol in 46°58'40.959"N, 123°46'55.785"W.*



## 1.73) Contact/Point - 0015/1 from h11300 / 1212sss / 2004-090 / sonar\_data040330215500

### Survey Summary

**Survey Position:** 046° 58' 41.553" N, 123° 46' 56.871" W  
**Least Depth:** [None]  
**Timestamp:** 2004-092.12:03:06 (04/01/2004)  
**Survey Line:** h11300 / 1212sss / 2004-090 / sonar\_data040330215500  
**Contact/Point:** 0015/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/1212sss/2004-090/sonar_data040330215500	0015	0.00	000.0	Primary

### Hydrographer Recommendations

[None]

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 OBJNAM - pile

### Office Notes

*Chart a visible pile symbol in 46°58'41.553"N, 123°46'56.871"W.*

## 1.74) Profile/Beam - 1/1 from vesselconfig / 1212dpnones / 2005-186 / dp

### Survey Summary

**Survey Position:** 046° 58' 09.294" N, 123° 52' 41.826" W  
**Least Depth:** [None]  
**Timestamp:** 2005-186.21:42:26.000 (07/05/2005)  
**DP Dataset:** vesselconfig / 1212dpnones / 2005-186 / dp  
**Profile/Beam:** 1/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Disproval charted pile; not seen on SSS.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
vesselconfig/1212dpnones/2005-186/dp	1/1	0.00	000.0	Primary

### Hydrographer Recommendations

Delete charted pile.

### S-57 Data

[None]

### Office Notes

*Concur. Delete charted pile in 46°58'09.294"N , 123°52'41.826"W.*

## 1.75) Profile/Beam - 2/1 from vesselconfig / 1212dpnones / 2005-186 / dp

### Survey Summary

**Survey Position:** 046° 58' 10.551" N, 123° 52' 40.226" W  
**Least Depth:** [None]  
**Timestamp:** 2005-186.21:43:12.000 (07/05/2005)  
**DP Dataset:** vesselconfig / 1212dpnones / 2005-186 / dp  
**Profile/Beam:** 2/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Disproval charted pile; not seen on SSS.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
vesselconfig/1212dpnones/2005-186/dp	2/1	0.00	000.0	Primary

### Hydrographer Recommendations

Delete charted pile.

### S-57 Data

[None]

### Office Notes

*Concur. Delete charted pile in 46°58'10.551"N , 123°52'40.226"W.*

**1.76) Profile/Beam - 1/1 from vesselconfig / 1212dpnones / 2004-082 / 03222004dp**

**Survey Summary**

**Survey Position:** 046° 58' 02.996" N, 123° 51' 38.490" W  
**Least Depth:** [None]  
**Timestamp:** 2004-082.22:46:03.000 (03/22/2004)  
**DP Dataset:** vesselconfig / 1212dpnones / 2004-082 / 03222004dp  
**Profile/Beam:** 1/1  
**Charts Affected:** [no CHAPP data available]

**Remarks:**

Offshoremost of four piles awash, near floating pier.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
vesselconfig/1212dpnones/2004-082/03222004dp	1/1	0.00	000.0	Primary

**Hydrographer Recommendations**

Chart Pile.

**S-57 Data**

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 INFORM - Offshoremost of four piles awash, near floating pier.  
 OBJNAM - pile

**Office Notes**

*Concur. Chart a pile in 46°58'02.996"N, 123°51'38.490"W.*

## 1.77) Profile/Beam - 1/1 from h11300 / 1212dpones / 2005-010 / 011005\_dp

### Survey Summary

**Survey Position:** 046° 57' 55.744" N, 123° 54' 02.073" W  
**Least Depth:** [None]  
**Timestamp:** 2005-010.21:59:23.000 (01/10/2005)  
**DP Dataset:** h11300 / 1212dpones / 2005-010 / 011005\_dp  
**Profile/Beam:** 1/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Disproval charted pile. Not visible. Not seen on sonargram.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/1212dpones/2005-010/011005_dp	1/1	0.00	000.0	Primary

### Hydrographer Recommendations

Delete charted pile.

### S-57 Data

[None]

### Office Notes

*Concur. Delete charted pile in 46°57'55.744"N , 123°54'02.073"W.*

## 1.78) Profile/Beam - 2/1 from h11300 / 1212dpones / 2005-010 / 011005\_dp

### Survey Summary

**Survey Position:** 046° 57' 55.587" N, 123° 54' 09.075" W  
**Least Depth:** [None]  
**Timestamp:** 2005-010.22:00:20.000 (01/10/2005)  
**DP Dataset:** h11300 / 1212dpones / 2005-010 / 011005\_dp  
**Profile/Beam:** 2/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Uncharted pile

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/1212dpones/2005-010/011005_dp	2/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart new pile.

### S-57 Data

**Geo object 1:** Pile (PILPNT)  
**Attributes:** CATPLE - 3:post  
 CONDTN - 2:ruined  
 CONVIS - 1:visual conspicuous  
 OBJNAM - pile

### Office Notes

*Concur. Chart a visible pile in 46°57'55.587"N, 123°54'09.075"W.*

**1.79) Profile/Beam - 1/1 from h11300 / 1212dpones / 2004-096 / 04052004dp**

**Survey Summary**

**Survey Position:** 046° 57' 31.615" N, 123° 50' 59.398" W  
**Least Depth:** [None]  
**Timestamp:** 2004-096.21:30:40.000 (04/05/2004)  
**DP Dataset:** h11300 / 1212dpones / 2004-096 / 04052004dp  
**Profile/Beam:** 1/1  
**Charts Affected:** [no CHAPP data available]

**Remarks:**

Revised position charted pile

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
h11300/1212dpones/2004-096/04052004dp	1/1	0.00	000.0	Primary

**Hydrographer Recommendations**

Revise position of charted pile.

**S-57 Data**

[None]

**Office Notes**

*Concur with clarification. Chart a pile in 46°57'31.615"N , 123°50'59.398"W. Delete the charted pile in 46°57'32.80"N , 123°51'01.35"W.*

## 1.80) Profile/Beam - 2/1 from h11300 / 1212dpones / 2004-096 / 04052004dp

### Survey Summary

**Survey Position:** 046° 58' 09.864" N, 123° 52' 35.570" W  
**Least Depth:** [None]  
**Timestamp:** 2004-096.21:36:14.000 (04/05/2004)  
**DP Dataset:** h11300 / 1212dpones / 2004-096 / 04052004dp  
**Profile/Beam:** 2/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Pile

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/1212dpones/2004-096/04052004dp	2/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart pile.

### S-57 Data

[None]

### Office Notes

*Concur. Chart a visible pile in 46°58'09.864"N, 123°52'35.570"W.*



## 1.81) Profile/Beam - 3/1 from h11300 / 1212dpones / 2004-096 / 04052004dp

### Survey Summary

**Survey Position:** 046° 58' 12.131" N, 123° 52' 38.178" W  
**Least Depth:** [None]  
**Timestamp:** 2004-096.21:37:09.000 (04/05/2004)  
**DP Dataset:** h11300 / 1212dpones / 2004-096 / 04052004dp  
**Profile/Beam:** 3/1  
**Charts Affected:** [no CHAPP data available]

#### Remarks:

Dol in ruins.

### Feature Correlation

Address	Feature	Range	Azimuth	Status
h11300/1212dpones/2004-096/04052004dp	3/1	0.00	000.0	Primary

### Hydrographer Recommendations

Chart dol in ruins.

### S-57 Data

[None]

### Office Notes

*Concur. Chart a dolphin in 46°58'12.131"N, 123°52'38.178"W.*

## **2 - AWOIS Features**

**2.1) Profile/Beam - 1/1 from h11300 / 1212dpones / 2004-310 / 110504\_310dp**

**Primary Feature for AWOIS Item #53090**

**Search Position:** 046° 57' 30.930" N, 123° 50' 42.700" W (*AWOIS position*)  
**Historical Depth:** 1.22 m  
**Search Radius:** 50  
**Search Technique:** S2,ES,DI,SD  
**Technique Notes:** [None]

**History Notes:**

H8293/56--WCFP 1656; A STUMP WAS LOCATED WITH A LEAST DEPTH OF 4 FT IN POS. 46 57 31.6N, 123 50 38.1W. STUMP WAS CHARTED AS A SNAG. ENTERED 11/03 MCR

**Survey Summary**

**Survey Position:** 046° 57' 31.900" N, 123° 50' 43.762" W (*Charted position*)  
**Least Depth:** [None]  
**Timestamp:** 2004-310.21:21:27.000 (11/05/2004)  
**DP Dataset:** h11300 / 1212dpones / 2004-310 / 110504\_310dp  
**Profile/Beam:** 1/1  
**Charts Affected:** [no CHAPP data available]

**Remarks:**

The charted snag is in very shallow water and 200% side scan coverage was not acquired. The snag was not observed in 100% coverage, however, and given the age of the feature along with the swift currents that characterize the river in this area, the hydrographer is satisfied that the snag does not exist.

**Feature Correlation**

Address	Feature	Range	Azimuth	Status
h11300/1212dpones/2004-310/110504_310dp	1/1	0.00	000.0	Primary
S-N914-NRT3-04	AWOIS # 53090	37.44	323.3	Secondary

**Hydrographer Recommendations**

Delete charted snag.

## S-57 Data

[None]

## Office Notes

*Concur in part. An obstruction with a depth of 7 feet was located during office processing in 46°57'30.66"N , 123°50'42.72"W. Delete the charted Snag in 46°57'31.900"N , 123°50'43.762"W and chart a dangerous 7 Obstn in 46°57'30.66"N , 123°50'42.72"W.*



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

**TIDE NOTE FOR HYDROGRAPHIC SURVEY**

**DATE :** December 5, 2005

**HYDROGRAPHIC BRANCH:** Pacific Hydrographic Branch  
**HYDROGRAPHIC PROJECT:** S-N914-NRT3-2004  
**HYDROGRAPHIC SHEET:** H11300

**LOCALITY:** Vicinity of Aberdeen, WA  
**TIME PERIOD:** March 22-December 14, 2004; July 5, 2005

**TIDE STATION USED:** 944-0910 Toke Point, WA  
Lat. 46 42.5' N Long. 123 58.0' W  
**PLANE OF REFERENCE (MEAN LOWER LOW WATER):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 2.493 meters

**TIDE STATION USED:** 944-1187 Aberdeen, WA  
Lat. 46 58.1' N Long. 123 51.3' W  
**PLANE OF REFERENCE (MEAN LOWER LOW WATER):** 0.000 meters  
**HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE:** 2.869 meters

**REMARKS: RECOMMENDED ZONING**  
Use zone(s) identified as: GH8, GH9, GH10, GH11, GH12, & GH13

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.

*Fa [Signature]*  
\_\_\_\_\_  
CHIEF, PRODUCTS AND SERVICES DIVISION



**ATLANTIC HYDROGRAPHIC BRANCH  
EVALUATION REPORT FOR H11300 (2004-05)**

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

**B. DATA ACQUISITION AND PROCESSING**

**B.1 EQUIPMENT**

The following software was used to process data at the Atlantic Hydrographic Branch:

Hydrographic Processing System  
MicroStation J, version 07.01.04.16  
I/RAS B, version 07.01.000.18  
MapInfo, version 8.0  
CARIS HIPS/SIPS 6.0  
PYDRO, version 6.8.0

The smooth sheet was plotted using a Hewlett Packard DesignJet 2500CP plotter.

**C. VERTICAL AND HORIZONTAL CONTROL**

**C1. Tides and Water Levels**

A request for Approved Tides was sent to N/OPS1 on August 24, 2005.

Approved tides and zoning were applied during office processing.

**C2. Horizontal Control**

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM Zone 10N. Office processing of this survey is based on these values.

**D. RESULTS AND RECOMMENDATIONS**

**D1. Chart Comparison 18502 (85<sup>th</sup> Ed. Jun 04)**

The charted hydrography originates with prior surveys and requires no further consideration. The hydrographer makes an adequate chart comparison in section D1. of the Descriptive Report. The following should be noted:

1. The present survey does not adequately define the sounding datum line (zero curve) through out the common area. It is recommended that charting disposition for these areas be deferred to Marine Charting Division (MCD).

2. A charted "line" shown on a NE/SW bearing from Latitude 46°58'28.83"N, Longitude 123°48'17.11"W to Latitude 46°58'13.02"N, Longitude 123°48'35.57"W shows no significant purpose. It is recommended that the line be deleted from the chart unless other information indicates otherwise.

3. Numerous charted visible piles and dolphins within the common area of the present survey were neither verified nor disproved by the hydrographer. It is recommended that these features be retained as charted unless other information indicates otherwise.

4. The hydrographer located an area foul with piles in the vicinity of Latitude 46°57'41.36"N, Longitude 123°50'04.10"W. It is recommended that the foul area be charted as show on the present survey.

5. A charted row of piles from Latitude 46°58'32.25"N, Longitude 123°46'45.10"W to Latitude 46°58'41.81"N, Longitude 123°46'51.12"W was verified by the hydrographer. It is recommended that the dashed line of piles be retained as charted.

## **D2. Additional Results**

### Shoreline

Shoreline in the vicinity from Latitude 46°57'40.60"N, Longitude 123°46'35.13"W to Latitude 46°57'23.95"N, Longitude 123°46'08.64"W has changed greatly. Shoreline changes were not submitted with the present survey. It is recommended that the disposition for charting be deferred to MCD.

**Junctions**H11299 (2004-05 to the west

A standard junction was effected between the present survey and survey H11299 (2004-05).

There are no junction surveys to the east. Present survey depths are in harmony with the charted hydrography to the east.

**Adequacy of survey**

This is an adequate hydrographic survey. Additional work is recommended to adequately delineate the low water datum within the common areas of the present survey.

**Miscellaneous**

Chart compilation was done by Atlantic Hydrographic Branch personnel in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland. The following NOS raster chart was used for compilation of the present survey:

18502 (85<sup>th</sup> Edition, Jun. /04)  
Corrected through NM Jun. 5/04  
Corrected through LNM May 18/04



A handwritten signature in cursive script, appearing to read "R. H. Whitfield", written in dark ink.

Richard H. Whitfield  
Cartographer  
Verification of Field Data  
Evaluation and Analysis

APPROVAL SHEET  
H11300


Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disapproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

  
\_\_\_\_\_  
Norris A. Wike  
Cartographer  
Atlantic Hydrographic Branch

Date: 12/20/06

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

Approved:   
\_\_\_\_\_  
P. Tod Schattgen  
Commander, NOAA  
Chief, Atlantic Hydrographic Branch

Date: 1/30/07

