H11058

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. RA-10-11-01

Registry No. H-11058

LOCALITY

State Alaska

General Locality Clarence Strait

Sublocality Lake Bay and Vicinity

2001

CHIEF OF PARTY

CDR D. R. Herlihy, NOAA

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DATE

NOAA FORM 77-28 (11-72)

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

REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H11058

INSTRUCTIONS The hydrographic sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the office.

FIELD NO. RA-10-11-01

State: Alaska

General Locality: Clarence Strait

Sublocality: Lake Bay and Vicinity

Scale: 1:10,000 Date of Survey: 5/8/01 - 5/15/01

Instructions Date: 3/23/2001 Project No.: OPR-O327-RA-01
Change No. 1, 5/1/2001

Vessel: NOAA Ship RAINIER launches 2121, 2122, 2123, 2124, 2125, 2126

Chief of Party: CDR D. R. Herlihy, NOAA

Surveyed by: RAINIER Personnel

Soundings taken by echo sounder: Knudsen 320M, Reson SeaBat 8101

Graphic record scaled by: RAINIER Personnel

Graphic record checked by: RAINIER Personnel

Evaluation by: R. Davies Automated plot by: HP Designjet 1050C

Verification by: R. Davies, E. Domingo

Soundings in: Fathoms and tenths at MLLW

REMARKS: Time in UTC. UTM Projection Zone 8

Revisions and annotations appearing as endnotes were generated during office processing.

All separates are filed with the hydrographic data.

As a result, page numbering may be interrupted or non-sequential

Descriptive Report to Accompany Hydrographic Survey H11058

Project OPR-O327-RA-01
Northern Clarence Strait and Zimovia Strait, Alaska
Scale 1:10,000
May 2001
NOAA Ship RAINIER
Chief of Party: Commander Daniel R. Herlihy, NOAA

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions OPR-O327-RA-01, dated March 23, 2001, and the Draft Standing Project Instructions dated April 6, 1998.[1] The purpose of this project is to provide contemporary hydrography with full bottom multibeam coverage in Northern Clarence Strait and Zimovia Strait, Alaska. The project addresses inadequate chart data and responds to requests from the Seventeenth U.S. Coast Guard District, Southeast Alaska Pilots Association, and the Alaska Coastwise Pilots Association for contemporary hydrography in the vicinity of Zimovia Strait. Zimovia Strait is a connecting corridor for cruise ships and other commercial shipping traffic in Southeast Alaska, and serves as an alternate route for vessel thoroughfare through Snow Passage.

The survey area is located in Clarence Strait at the south entrance to Kashevarof Passage in the vicinity of Coffman Cove and Lake Bay. The survey's northern limit is latitude 56°03'53.2" N and the southern limit is latitude 55°59'58.4"N. The survey's western limit is longitude 132°55'31.0"W and the eastern limit is longitude 132°46'28.9"W. Final changes in the Project Letter Instructions and survey limits were made to provide contemporary hydrography in Coffman Cove to support a proposed Alaska Marine Highway System/Inter-Island Ferry Authority terminal on Prince of Wales Island.

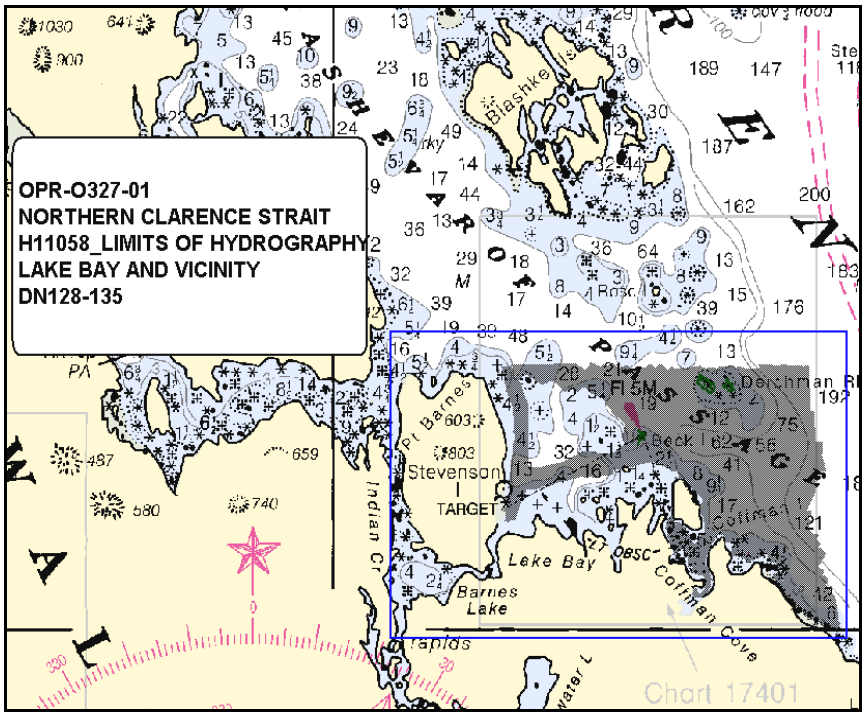


Figure 1. H11058 Survey Limits

Data acquisition was conducted from May 8 to May 15, 2001 (DN 128 to 135).

B. DATA ACQUISTION AND PROCESSING

A complete description of data acquisition and processing systems, survey vessels, quality control procedures and data processing methods can be found in the *OPR-O327-RA-01 Data Acquisition and Processing Report,*[2] submitted under separate cover. Items specific to this survey, and any deviations from the aforementioned report are discussed in the following sections.

B1. Equipment and Vessels

Data were acquired by RAINIER survey launches (vessel numbers, 2121, 2122, 2123, 2124, 2125, and 2126). Vessels 2121, 2123, 2124 and 2126 were used to acquire shallow-water multibeam (SWMB) soundings and sound velocity profiles. Vessels 2122 and 2125 were used to acquire vertical-beam echo soundings (VBES) and detached positions (DPs) for shoreline verification. No unusual vessel configurations or problems were encountered during this survey.[3]

B2. Quality Control

Crosslines

Vertical Beam Echo Sounder (VBES) crosslines totaled 9 nautical miles, comprising 15% of mainscheme VBES hydrography. Crosslines generally agreed within 1 meter of mainscheme hydrography.

Shallow-Water Multibeam (SWMB) crosslines totaled 10.06 nautical miles, comprising 4.98% of SWMB hydrography. The Quality Control Report (CARIS HIPS) for the checkline file averaged 88.038%, with a depth tolerance factor of 0.013, which conforms to International Hydrographic Organization Order 1 specifications detailed in Special Publication S-44, Edition 4, as well as NOS Hydrographic Surveys Specifications and Deliverables Manual. See Appendix V [4]for the detailed report. The hydrographer believes through manual examination of the data the accuracy standards have been met and crossline agreement is good. Two reasons for the low checkline to mainscheme agreement could be the low percentage of crossline data acquired which was less than 5% of mainscheme hydrography and the irregular and steep bathymetry.

Junctions

There were no contemporary surveys which junction with survey H11058.[5]

Data Quality Factors

No unusual conditions were encountered during the survey that affected the expected accuracy and quality of survey data.[6]

B3. Data Reduction

HDCS sounding data, both SWMB and VBES, were reduced to mean lower-low water (MLLW) using unverified observed tides from station Ketchikan (945-0460), adjusted using a height ratio corrector of

1.04 and a time corrector of 6 minutes. These data were used in creating the tide corrector file "SheetF_Observed.tid." which was applied in CARIS. Detached position (DP) data were reduced to mean lower-low water (MLLW) using unverified observed tides from station Ketchikan (945-0460). These data were used in creating HPS tide table 99, which was utilized in HPTools to apply zoned tide correctors to the detached positions.

All other data reduction procedures for survey H11058 conform to those detailed in the *OPR-O327-RA-01 Data Acquisition and Processing Report*

C. VERTICAL AND HORIZONTAL CONTROL

A complete description of vertical and horizontal control for survey H11058 can be found in the *OPR-O327-RA-01 Horizontal and Vertical Control Report* [7], submitted under separate cover. A summary of horizontal and vertical control for this survey follows.

Horizontal Control

The horizontal datum for this project is the North American Datum of 1983 (NAD83). Differential GPS (DGPS) was the sole method of positioning. Differential corrections from U.S. Coast Guard beacons at Annette Island (323 kHz) and Point Gustavus (288 kHz) were utilized during this survey. Launch-to-launch DGPS performance checks were performed weekly in accordance with Section 3.2 of the FPM. Copies of the performance checks are included in the *OPR-O327-RA-01 Horizontal and Vertical Control Report*.

Vertical Control

The vertical datum for this project is Mean Lower-Low Water (MLLW). The operating National Water Level Observation Network (NWLON) primary tide station at Ketchikan, AK (945-0460) will serve as control for datum determination and as the primary source for water level reducers for survey H11058. RAINIER personnel installed Sutron 8210 “bubbler” tide gauges at the following subordinate stations in accordance with the Project Instructions:

Station Name	Station Number	Type of Gauge	Date of Installation	Date of Removal
Ratz Harbor	945-0815	30-day	April 19, 2001	May 16, 2001
Thorne Island	945-0938	30-day	April 18, 2001	May 15, 2001

The Pacific Hydrographic Branch will apply final approved (smooth) tides to the survey data during final processing.[8] A request for delivery of final approved (smooth) tides for survey H11058 was forwarded to N/OPS1 on May 23, 2001 in accordance with FPM 4.8.[9]

D. RESULTS AND RECOMMENDATIONS

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

A total of fourteen (14) AWOIS items were located within the limits of H11058 and investigated during this survey. Investigation methods, results, and charting recommendations have been entered into the

Microsoft Access AWOIS database and are submitted with the digital data. Printouts of the AWOIS Database forms and digital images are included in this report.

D.2 Chart Comparison

Survey H11058 was compared with chart 17382 (14th Ed.; April 26, 1997, 1:80,00)[10], and chart 17401 (10th Ed., September 4, 1999, 1:10,000)[11]. Unless otherwise noted, the Hydrographer recommends that data from the present survey supercede chart data:[12]

Chart 17401

Soundings from the present survey and Chart 17401 agreed well with differences generally less than 3 fathoms and a few differences of up to 4 fathoms. Significant differences not otherwise submitted as dangers to navigation or as AWOIS items are addressed below (refer to Appendix I for a copy of the Danger to Navigation Report and Appendix VI for a copy of the AWOIS Access Database)[13]. In some instances, where the bathymetry was found to be very irregular and along steep slopes, this survey found shoaler soundings between charted soundings even though agreement at the position of the charted depths was good. The discrepancies between charted and survey depths can likely be attributed to the irregular and steep bathymetry and increased bottom coverage using SWMB.[14]

In the vicinity of a charted 119-fathom sounding at, the present survey revealed a depth of 87 fathoms at 56°03'24.502"N, 132°48'05.929"W (636,892.7E, 6,214,581.1N). A 118-fathom sounding at 56°03'24.619"N, 132°48'00.498"W (636,986.5E, 6,214,587.7N) was located 60 meters to the east of the charted sounding. This area was covered by 100% SWMB.[15]

In the vicinity of a charted 24-fathom sounding, the present survey revealed a depth of 11.2 fathoms at 56°03'40.595"N, 132°49'04.625"W (635,861.8E, 6,215,046.3N). A 24-fathom sounding at 56°03'41.933"N, 132°49'00.190"W (635,937.2E, 6,215,090.0N) was located 65 meters northeast of the charted sounding. This area is steep and rocky and covered by 100% SWMB.[16]

In the vicinity of a charted 71-fathom sounding, the present survey revealed a depth of 51 fathoms at 56°02'49.410"N, 132°49'27.774"W (635,511.4E, 6,213,451.6N). A 67-fathom sounding at 56°02'47.478"N, 132°49'28.127"W (635,507.2E, 6,213,391.7N), was located 65 meters south of the 71-fathom charted sounding. This area was rocky and steep and covered by 100% SWMB.[17]

In the vicinity of a charted 11-fathom sounding at 56°01’19.87”N, 132° 48’40.09”W (636,423.9 E, 6,210,710.2 N), the present survey revealed a depth of 24 fathoms. This area was steep and covered by 100% SWMB.[18]

In the vicinity of a charted 27-fathom sounding, the present survey revealed a depth of 48 fathoms at 56°02'40.058"N, 132°51'01.316"W (633,902.2E, 6,213,111.9N). This area was steep and covered by 100% SWMB.[19]

In the vicinity of a charted 10 ½ -fathom sounding, the present survey revealed a depth of 18.7 fathoms at 56°02'22.215"N, 132°51'06.463"W (633,830.4E, 6,212,557.6N). This area was steep and covered by 100% SWMB.[20]

In the vicinity of a charted 5 ¾ -fathom sounding, the present survey revealed a depth of 10.4 fathoms at 56°01'38.698"N, 132°50'03.447"W (634,962.9E, 6,211,246.7N). This area was steep and covered by 100% SWMB.[21]

In the vicinity of a charted 39-fathom sounding, the present survey revealed a depth of 29 fathoms at 56°03'00.274"N, 132°50'47.792"W (634,116.7E, 6,213,744.0N). This area was steep and covered by 100% SWMB.[22]

In the vicinity of a charted 39-fathom sounding at 56°03’22.6”N, 132°52’28.99”W (632,345.0 E, 6,214,379.8 N), the present survey revealed a depth of 49 fathoms. This sounding was near a charted 50-fathom curve. This area was steep and covered by 100% SWMB.[23]

In the vicinity of a charted 23-fathom sounding, the present survey revealed a depth of 38 fathoms at 56°03'18.524"N, 132°52'20.533"W (632,495.2E, 6,214,258.4N). This area was steep and covered by 100% SWMB.[24]

In the vicinity of a 9-fathom sounding, the present survey revealed a depth of 9.6 fathoms at 56°02'55.508"N, 132°48'34.875"W (636,420.5E, 6,213,669.0N). This area was rocky and covered by 100% SWMB.[25]

Between charted 14-fathom and 9-fathom soundings, the present survey revealed a depth of 8.8 fathoms at 56°03'41.694"N, 132°49'40.359"W (635,242.8E, 6,215,060.7N). This area was covered by 100% SWMB.[26]

In the vicinity of a charted 18-fathom sounding, the present survey revealed a depth of 13.4 fathoms at 56°01'03.819"N, 132°48'01.281"W (637,111.6E, 6,210,235.5N). A 17.7-fathom sounding was located 40 meters north of the charted 18-fathom sounding at 56°01'05.080"N, 132°48'02.975"W (637,081.0E, 6,210,273.5N). This area was covered by 100% SWMB.[27]

There were no charted soundings in the wire drag area northeast of Coffman Island (Figure 2). This area extends south from 56°03'24.619"N, 132°48'00.498"W (636,986.5E, 6,214,587.7N) to 56°01'09.370"N, 132°47'56.982"W (637,180.5E, 6,210,409.4N) and west to 56°02'13.176"N, 132°49'57.718"W (635,028.6E, 6,212,315.4N). The prior survey did not reveal soundings in this area. No chart comparisons could be made and the Hydrographer recommends charting the area based on current hydrography.[28]

The Hydrographer recommends removing green tint from wire drag surveys from Chart 17401 in areas common with this survey.[29]

There is a small area southeast of Deichman Rock, (Figure 4.) which did not receive coverage during data acquisition. This area is in close proximity to a foul area and broken reef and approximately 120 meters by 170 meters. The Hydrographer recommends retaining charted soundings in that area due to inadequate survey data.[30]

Chart 17382

Soundings from the present survey and Chart 17382 agreed well with differences generally less than 3 fathoms.[31] Significant differences are addressed below.

In the vicinity of a charted 42-fathom sounding, the present survey revealed a depth of 23 fathoms at 56°03'19.869"N, 132°48'19.186"W (636,668.0E, 6,214,430.6N). This area was on a steep slope and depths ranged from 63 to 23 fathoms over a horizontal distance of 160 meters. This area was covered by 100% SWMB.[32]

In the vicinity of a charted 9-fathom 3 feet sounding, the present survey revealed a depth of 9.6 fathoms at 56°02'55.508"N, 132°48'34.875"W (636,420.5E, 6,213,669.0N). This area was covered by 100% SWMB.[33]

Final sounding comparisons will be made at the Pacific Hydrographic Branch after the application of smooth tides.[34]

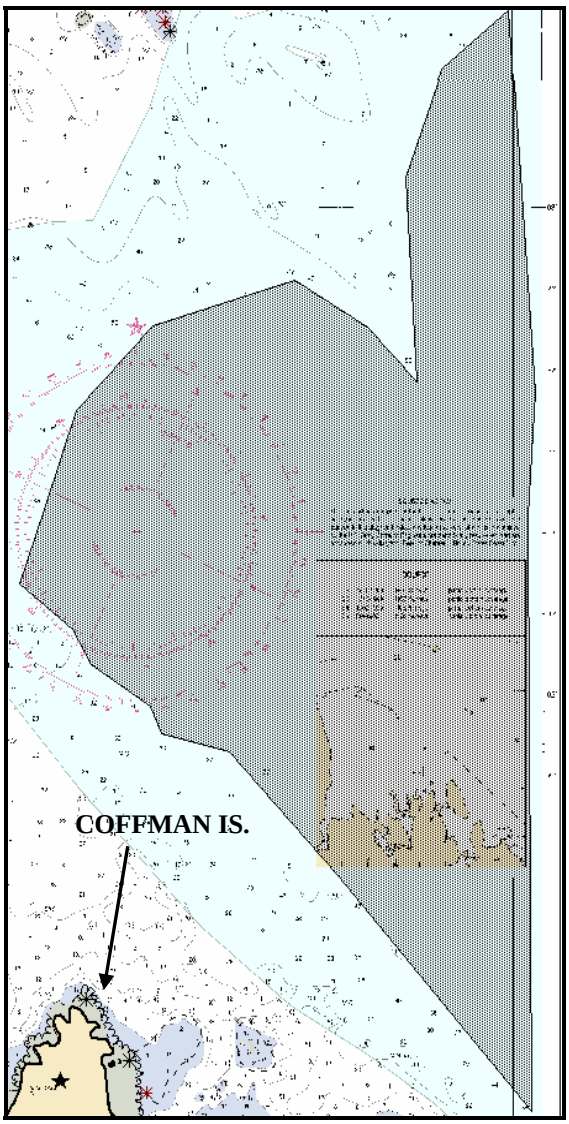


Figure 2. Region on Chart 17401 with no prior bottom coverage.

D.3 Shoreline

Method of Shoreline Verification

N/NGS3 supplied photogrammetric shoreline data from Project Ph6705 in raster format for T-12404, T-12403 and T-12402 for use as source shoreline. The T-sheet (TS) raster images were registered and digitized in MapInfo by RAINIER personnel and the resultant vector data were used in Hypack for field verification. In addition, features shown on the current editions of charts 17382 and 17401 were digitized in MapInfo by RAINIER personnel and displayed in Hypack for field verification.

Shoreline verification was conducted near predicted low water in accordance with the Standing Project Instructions and FPM 6.1 and 6.2. For this survey the general limit of safe navigation of a survey launch was four to twenty meters offshore of the apparent mean lower-water line. Water depths along this limit of safe navigation were approximately four meters at Mean Lower-Low Water (MLLW). Features inshore of this limit unreachable by survey launch are depicted on the Detached Position and Bottom Sample Plot as the Hydrographer's approximate representation of the shoreline.

Detached positions (DPs) taken during shoreline verification were recorded in Hypack and on DP forms,[35] and processed in HPS. These indicate revisions to features and features not found on the T-Sheet or chart. In addition, annotations describing shoreline were recorded on hard copy plots of digital shoreline. DP forms are included in Section I of the *Separates to be Included with Survey Data.*[36]

A detailed Detached Position and Bottom Sample plot [37](DPBS), in both paper copy and MapInfo format, is provided showing all detached positions and bottom samples with notes relating to each feature. The updated shoreline and features are also depicted on the final sounding plot. Verified T-Sheet shoreline that did not require revision is in the MapInfo table "H11058_Shoreline". New features, changes to the shoreline, and features verified from applicable T-Sheets T-12404, T-12403 and T-12402, are depicted in the MapInfo table "H11058_ShorelineUpdates." Charted shoreline, when used for reference purposes or when source data were not available, is depicted in the MapInfo table "H11058_ChartedShoreline."

The features found during this survey generally matched those of the source and charted shoreline. The T-Sheet shoreline was found to be very accurate in its depiction of low and high water features, requiring little revision. In many cases the MLLW line on the T-Sheet was found to actually be reefs or ledges, and the changes are reflected on the DP and BS Plots, and in the MapInfo table "H11058_ShorelineUpdates."[38]

Source Shoreline Changes and New Features

Ph 6705

The TS and charted (17401) foul area at 56°00'40.365"N, 132°47'58.051"W (637,190.6E, 6,209,512.4N), was disproved with a visual and echo sounder search (VN 2122, DN 128, Line #'s 000_1700, 192_2243, 185_2248, and 001_2316). The least depth reported with VBES was 2.5 fathoms at 56°00'39.168"N, 132°47'59.009"W (637,175.2E, 6,209,474.8N). The Hydrographer recommends removing the foul limit from the chart. [39]

A new foul area at 56°01'10.5"N, 132°49'04.3"W was defined using the limits of hydrography as the extents. In addition, a new rock (AWOIS # 52751, Pos. # 20063) marks the northern extent of the foul limit and two charted (17401) rocks, Pos. #'s 20057 and 20058, were found within the foul limits. The Hydrographer recommends charting based on present survey.[40]

The TS foul limit which has its southern extent at 56°00'40.36"N, 132°48'12.85"W (636934.4 E, 6209504.1 N) Pos. #20135, eastern extent at 56° 00' 42.544"N, 132° 47' 59.434"W (637164.5.2 E, 6209578.9 N) Pos. #20137 and northern extent at 56°01'07.43"N, 132°48'29.69"W (636615.9 E, 6210331.6 N), Pos. # 20054 was found to have three new broken reefs inside its limits. Due to the nature of the foul area and surrounding shoal, extents of the broken reefs were approximated from a distance. [41]

A TS islet was determined to be a new reef with its northern extent at 56°01'17.45"N, 132°49'03.51"W (636020.8 E, 6210622.8 N), Pos. # 20080 and its southern extent at 56°01'15.51"N, 132°48'59.90"W

(636085.2 E, 6210564.7 N), Pos. # 20082. This new reef was located inside the TS foul limit extents. The reef was not exposed at high water and it did not have any vegetation present. The Hydrographer recommends removing the islet and charting based on present survey.[42]

A TS rock was disproved at 56°00'51.598"N, 132°50'12.701"W (634848.3 E, 6209785.9 N), Pos. # 52125.[43] See AWOIS 52745.[44]

A TS floating dock in Coffman Cove was repositioned, Pos. #'s 52211-52214. See AWOIS 52749.[45]

A new bulwark was positioned with its northern extent at 56°00'49.92"N, 132°49'57.96"W (635104.9 E, 6209741.9 N), Pos. # 52206 and its southern extent at 56°00'49.06"N, 132°49'57.44"W (635114.8 E, 6209715.9 N), Pos. # 52207. This bulwark marks the beginning construction of a new pier, which will serve as a terminal for the Alaska Marine Highway.[46] See photo "52206-52207.jpg" [47]

A new reef was positioned with its northern extent at 56°01'20.387"N, 132°50'42.056"W (634312.3 E, 6210659.8 N), Pos. # 51540, its eastern extent at 56°01'19.930"N, 132°50'40.926"W (634332.3 E, 6210646.3 N), Pos. # 51543, and its southern extent at 56°01'18.131"N, 132°50'41.633"W (634321.8 E, 6210590.3 N), Pos. # 51542. [48]

In the vicinity of Coffman Cove, two wrecks were noted in the field during shoreline acquisition and on the DPBS Plot. They were located far away and high up on the beach and were not positioned with differential GPS. Based upon the Hydrographer's field notes, the first wreck was a wooden barge located in the approximate position 56°00'36"N, 132°49'54"W (687071.4E, 6210141.3N).[49] The second wreck is a wooden boat located in approximate position 56°00'36"N, 132°50'23"W.[50] Neither wreck represented any dangers to navigation at any stage of tide.[51]

In the vicinity of the Triplets and Deichman Rock, there were several TS and Charted (17401) rocks identified as reefs as well as TS rocks identified as high points or extents of TS reefs. In addition, new broken reefs and ledges were identified and depicted on the DPBS Plot.[52]

The TS reef and foul area surrounding Deichman Rock were identified as a broken ledge replacing the TS reef limits with its northern extent at 56°03'41.284"N, 132°49'27.668"W (635462.7 E, 6215055.0 N), Pos. # 20689, its western extent at 56°03'37.847"N, 132°49'31.794"W (635394.7 E, 6214946.5 N), Pos. # 20700, its southwestern extent at 56°03'28.008"N, 132°49'35.280"W (635344.0 E, 6214640.5 N), Pos. # 20697, its southern extent at 56°03'27.277"N, 132°49'25.925"W (635506.5 E, 6214623.0 N), Pos. # 20694, its eastern extent at 56°03'32.092"N, 132°49'19.206"W (635618.0 E, 6214775.5 N), Pos. # 20692, and 56°03'35.015"N, 132°49'19.822"W (635604.5 E, 6214865.5 N), Pos. # 20691. See Figure 3.[53]

An existing TS reef was repositioned with its northeastern extent at 56°03'24.384"N, 132°49'37.120"W (635315.7 E, 6214527.5 N), Pos. # 20696 and its southwestern extent at 56°03'22.351"N, 132°49'42.913"W (635217.5 E, 6214461.5 N), Pos. # 20695. [54]

Charted Features [55]

The submerged charted (17401) rocks at 56°03'41.232"N, 132°49'33.900"W (635355.0 E, 6215050.0 N) , Pos. # 20687 were disproved after conducting a visual and echo sounder search (RA2, Dn129, Lines 000_1603 and 000_1545) and with SWMB (RA1, Dn131, Lines 084_2136 and 083_2144, and RA6, Dn135, Line 008_1651). Water visibility in this area was seven meters. The water depth over the historical charted feature at the time of the DP was 13.3 meters. The least depth recorded with SWMB in

the vicinity of the reef was 6.9 fathoms. The Hydrographer recommends charting based on present survey.[56]

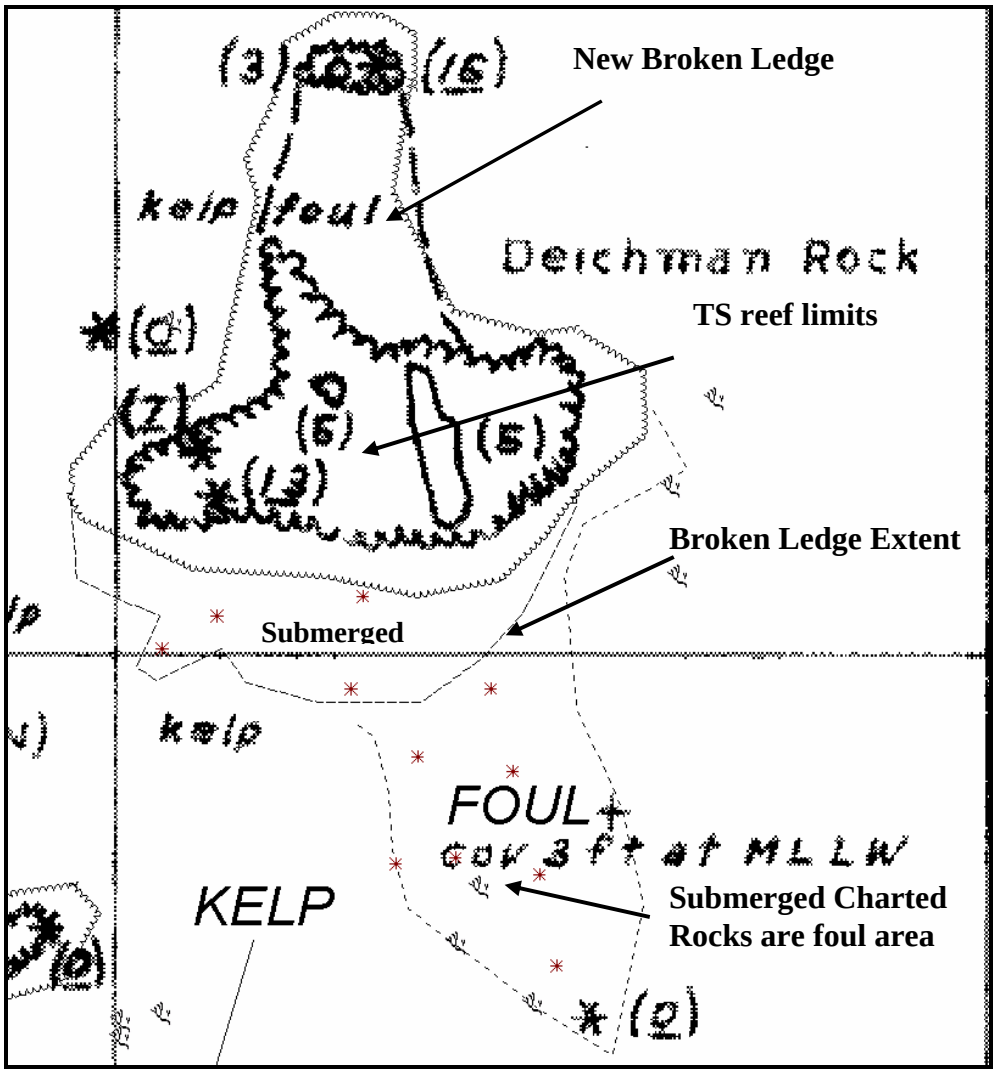


Figure 3. Shoreline Updates show limits of new broken reef compared to TS reef.

In the vicinity of Deichman Rock, several submerged charted (17401) and TS rocks were identified as a foul area with kelp. VBES (RA2, Dn129, Lines 045_2158, 246_2200, 044_2202, 245_2205, 043_2206, 244_2209, and 926_2300) were conducted at high water using 20-meter line spacing to develop this rocky shoal which was later determined to be a foul area based on the rocky bathymetry, kelp, and shoal soundings. The eastern extent is a TS rock at 56°03'25.66"N, 132°49'18.930"W (635629.0E, 6214576.8N), the southern extent is a TS rock at 56°03'21.63"N, 132°49'19.65"W (635633.1E, 6214452.3N), the northern extent is at 56°03'32.279"N, 132°49'16.992"W (635656.1E, 6214782.5N), Pos. # 20693, taken over a least depth of 1.3 fathoms which marks the high point of the shoal area. The inshore limits are marked by the extents of a new broken reef and by VBES (RA2, Dn 129, Lines 041_2211 and 039_2215. See Figures 3 and 4. The Hydrographer recommends charting the area as foul based on current hydrography and detached positions.[57]

A submerged charted (17401) rock at 56°00'48.41"N, 132° 50'19.23"W (634738.3 E, 6209683.8 N) was not addressed during shoreline verification. The feature was inside the limit of hydrography and the

shoalest sounding was 0.8 fathoms located 18 meters north at 56°00'48.871"N, 132°50'19.800"W (634,728.0E, 6,209,697.8N). The Hydrographer recommends retaining the charted rock.[58]

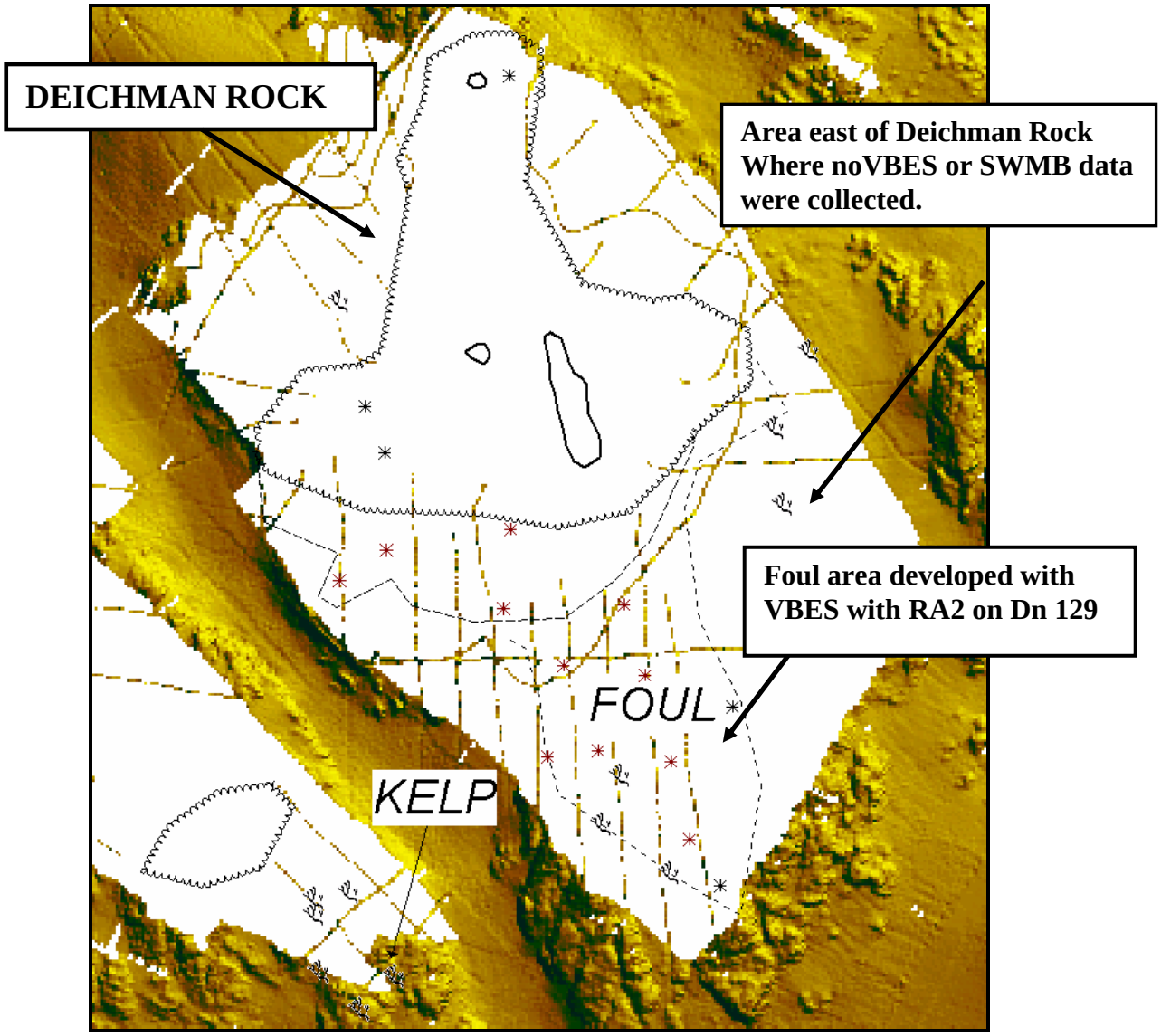


Figure 4. SWMB and VBES Coverage surrounding Deichman Rock.

A charted (17401) floating pier and float plane dock in Coffman Cove was repositioned 60 meters southwest at 56°00'36.039"N, 132° 50'00.917"W (635067.4 E, 6209311.4 N), Pos. # 52166, southwest extent, and its northern extent at 56°00'36.642"N, 132° 50'00.248"W (635078.4 E, 6209330.4 N), Pos. # 52165. The floating dock is now located in the middle of the channel leading to the south end of the cove which provides a landing strip for float planes departing and arriving frequently from Coffman Cove.[59]

A charted (17401) rock was disproved at 56°01'17.052"N, 132° 50'35.269"W (634433.0 E, 6210560.4 N), Pos. # 52095 by conducting a 5-minute visual and echo sounder search. The average water depth was 8-10 meters. Water visibility was approximately 4 meters. The depth recorded at the disproval detached position was 5.1 fathoms (9.3 meters). This area was also covered with 100% SWMB. The Hydrographer recommends removing the rock from the chart.[60]

A charted (17401) rock was disproved at 56°01'11.620"N, 132° 50'43.971"W (634287.6 E, 6210387.8 N), Pos. # 51521 by conducting a 5-minute visual and echo sounder search, (RA5, Dn128, Lines 002_1610, 003_1641, Dn129, Line 073_2116. The average water depth was 3.5 meters. Water visibility was approximately 2 meters. The depth recorded at the disproval detached position was 2.6 fathoms (4.8 meters), corrected using unverified observed tides. The Hydrographer recommends removing the rock from the chart.[61]

Recommendations

The Hydrographer recommends that the shoreline as depicted on the Detached Position and Bottom Sample plot and final sounding plot supersede and complement shoreline information compiled on the, T-Sheets and charts as noted. These revisions are recorded in the MapInfo digital files named "H11058_Shoreline" and "H11058_ShorelineUpdates". In addition, field notes made by the Hydrographer, including verification of source features and descriptions of shoreline classification, are submitted in the digital MapInfo file "H11058_ShorelineNotes."[62]

D.4 Dangers to Navigation

Thirty-three (33) dangers to navigation were found and reported to the Pacific Hydrographic Branch for verification and final submission to the Seventeenth Coast Guard District on December 9, 2001. A copy of the preliminary Danger to Navigation Report is included in Appendix I.[63] A copy of the final report will be inserted by PHB following verification and submission to the U.S Coast Guard.[64]

D.5 Aids to Navigation

Survey H11058 included one aid to navigation (ATON). Beck Island Light ATON was found to serve its intended purpose. The Detached Position (DP) and charted position of Beck Island Light were identical. The Light List position (USCG Light List 22475) was found to have an approximate difference of 95 meters between the DP and Charted (17401) position.

A Detached position was taken on Beck Island Light as requested in the AWOIS instructions, see AWOIS 52750. No GPS static surveys were conducted for Survey H11058.[65]

D.6 Miscellaneous

Bottom samples were not collected due to time constraints. The Hydrographer recommends retaining bottom samples as charted.[66]

E. APPROVAL

As Chief of Party, I have ensured that standard field surveying and processing procedures were followed in producing this examination in accordance with the Hydrographic Manual, Fourth Edition, Hydrographic Survey Guidelines, Field Procedures Manual and the NOS Hydrographic Surveys Specifications and Deliverables, as updated for 2001.

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

Survey H11058 is complete and adequate to supersede charted soundings in their common areas.[67] No additional work is required for this survey with the exception of the area southeast of Deichmann Rock that did not receive VBES or SWMB coverage.[68]

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

Title	Date Sent	Office
Data Acquisition and Processing Report for OPR-O327-RA-01	July 30, 2001	N/CS34
Horizontal and Vertical Control Report for OPR-O327-RA-01	July 30, 2001	N/CS34
Tides and Water Levels Package for OPR-O327-RA-01	July 3, 2001	N/OPS1
Coast Pilot Report for OPR-O327-RA-01	TBD [69]	N/CS2

Approved and Forwarded:

Daniel R. Herlihy
Commander, NOAA
Commanding Officer

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

Survey Sheet Manager:

Kristie J. Twining
Lieutenant (junior grade), NOAA

Field Operations Officer:

Edward J. Van Den Ameele
Lieutenant, NOAA

Revisions Compiled During Office processing and Certification.

[1] Change No. 1 dated 5/1/01
[2] Filed with the project records.
[3] Concur
[4] Filed with the hydrographic data.
[5] Survey H11058 junctions the following surveys.

Survey	Scale	Location
H11162	1:10,000	North
H11163	1:10,000	Northwest
H11164	1:20,000	East

The junctions were completed during office processing. Soundings and depth curves are in good agreement within the common area. A “Joins” note is shown on the smooth sheet in the junction\ areas.
[6] Concur
[7] Filed with the project records.
[8] Approved tide note dated August 31 is attached.
[9] Filed with the hydrographic data.
[10] Chart 17382, 16th Edition, June 1, 2005
[11] Chart 17401, 11th Edition, Feb. 1, 2004
[12] Concur, survey H11058 is recommended to supersede the prior information within the common area except where mentioned in the report.
[13] Both items were attached to this report.
[14] Concur
[15] Chart according to this survey.
[16] Chart according to this survey.
[17] Chart according to this survey.
[18] Chart according to this survey.
[19] Chart according to this survey.
[20] Chart according to this survey.
[21] Chart according to this survey.
[22] Chart according to this survey.
[23] Chart according to this survey.
[24] Chart according to this survey.
[25] Chart according to this survey.
[26] Chart according to this survey.
[27] Chart according to this survey.
[28] Concur
[29] Concur
[30] Concur
[31] Concur
[32] Chart according to this survey.
[33] Chart according to this survey.
[34] With the application of smooth tides, no changes to the comparison were noticed. This survey is adequate to supersede all charted soundings within the common area, except where noted in this report.
[35] Filed with the hydrographic records.
[36] Filed with the hydrographic records.
[37] Filed with the hydrographic records.
[38] Shoreline verification conducted by the hydrographer and portrayed on the detached position plot has been analyzed during office processing and shown on the smooth sheet as warranted.
[39] Concur
[40] Concur
[41] Chart according to the smooth sheet.
[42] Concur, chart according to the smooth sheet.
[43] Concur
[44] Attached to this report.

[45] Chart according to the smooth sheet.
[46] Chart with the lastest available information.
[47] Filed with the hydrographic records.
[48] Chart according to the smooth sheet.
[49] Chart a visible wreck PA at the approximate position noted in this report.
[50] Chart a visible wreck PA at the approximate position noted in this report.
[51] Concur
[52] Shoreline verification conducted by the hydrographer and portrayed on the detached position plot has been analyzed during office processing and shown on the smooth sheet as warranted.
[53] Chart according to the smooth sheet.
[54]Chart according to the smooth sheet.
[55] The following features were not discussed or investigated by the hydrographer and should be retained as charted

Feature	Latitude(N)	Longitude(W)
Subm obstn PA	56/01/22.1	132/50/27.3
Log boom	56/00/57.3	132/50/23.4
Log boom	56/00/51.5	132/50/06.1
Log boom	56/00/53.9	132/50/04.9
Log boom	56/00/47.7	132/50/00.5

[56] Concur
[57] Concur, chart according to the smooth sheet.
[58] Concur
[59] Chart according to the smooth sheet.
[60] Concur
[61] Concur
[62] Shoreline verification conducted by the hydrographer and portrayed on the detached position plot has been analyzed during office processing and shown on the smooth sheet as warranted. It is recommended that all soundings within the foul limits drawn on the smooth sheet not be charted. It is felt that soundings within foul areas encourage mariners to enter these dangerous areas.
[63] Filed with the hydrographic records.
[64] The Danger to navigation letter was reviewed at the Pacific Hydrographic Branch and the dangers were forwarded to the U.S. Coast Guard. See attached copy.
[65] The evaluator recommends that MCD use the latest information to chart aids to navigation.
[66] Concur
[67] Except where mentioned in the report.
[68] Concur, on a time available basis.
[69] Dated 12/03/01

RECRD	**52534**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	O
		CARTOCODE	0067	SNDINGCODE	130	DEPTH	

LAT83	56 03 17.95	LONG83	132 48 44.01	NATIVDATUM	31
LATDEC:	56.054986111111	LONDEC:	132.812225	GPQUALITY	High
				GPSOURCE	Scaled

PROJECT	OPR-O327	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	350	INIT	MCR	ASSIGNED	2/14/2000
TECNIQ	MB,ES,DI				
Techniqnote	DEVELOP SHOAL AREA TO EXTENT OF FEATURE, SEARCH RADIUS PROVIDED FOR REFERENCE PURPOSES				

History

HISTORY
H-3904WD/16-- 29 FT (4 3/4 FM) IN POS. 56 03 13.8N, 132 48 43.2W, SE AK DATUM AND 45 FT (7 FM) IN POS. 56-03-11.5 N 132-48-35 W). SOUNDINGS OBTAINED BY LEAD LINE DURING WIRE DRAG OPERATIONS. ENTERED 2/00 MCR

Fieldnote

INVESTIGATION

DATE(S): 5/ 11 /01 (DN: 131)

HYDROGRAPHIC SURVEY NUMBER: H11058

VN: 2121 TIME: 18:02

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER) Echo Sounder 100% SWMB

SURVEYED POSITION: LAT.56/03/17.700"N LON. 132/48/45.475W (636,215.4E, 6,214,349.1N

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY: The present survey revealed a 5.1-fathom sounding in close proximity to the charted (17401) 4 3/4 lead line sounding. Line 023_1802/Ping 1070/Beam 62.

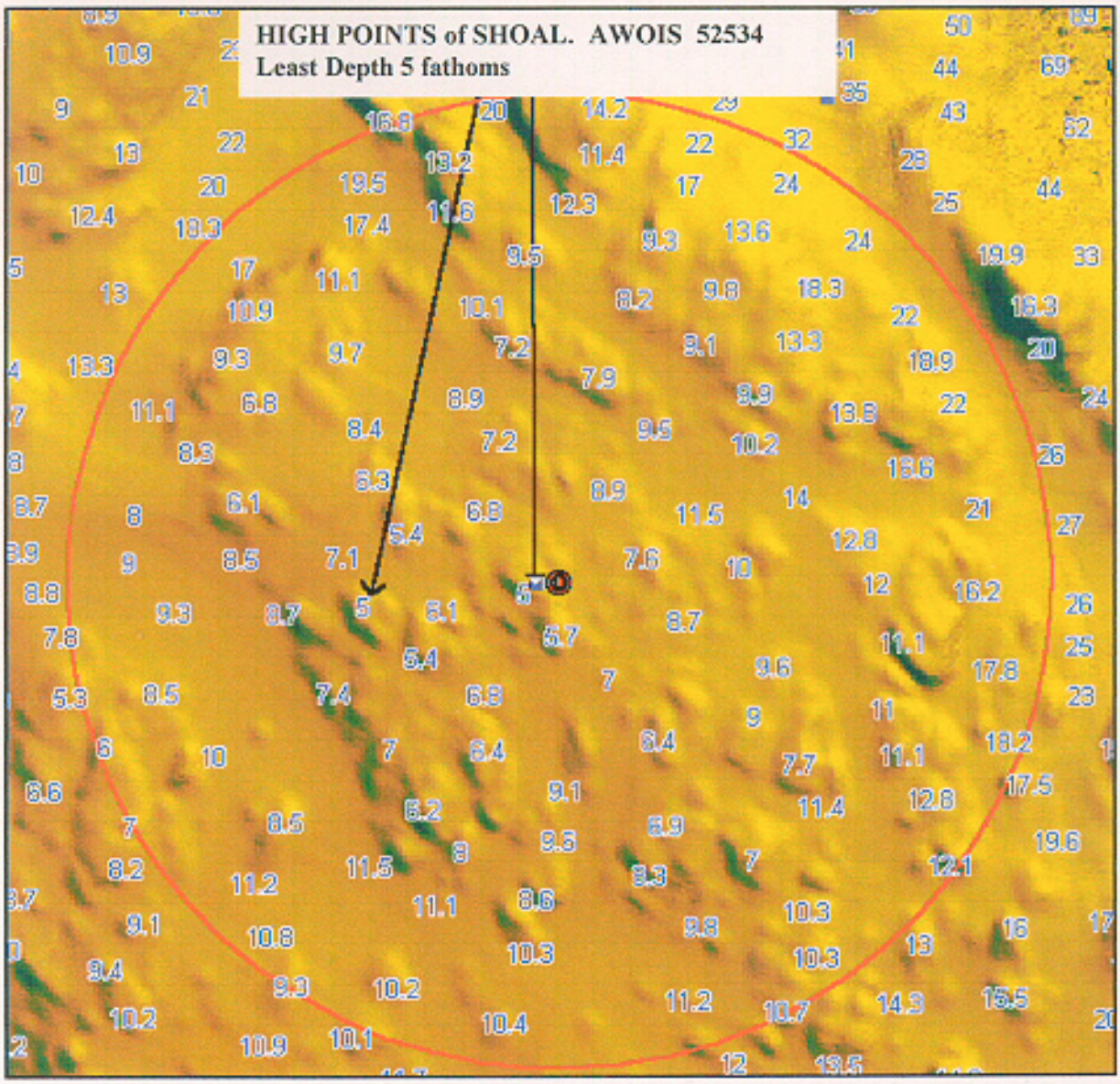
CHARTING RECOMMENDATION (HYDROGRAPHER):Chart least depth of current hydrography. See AWOIS_52534.doc

EVALUATOR COMMENTS:Concur

Proprietary

YEARSUNK NIMANUM

Print Record


HIGH POINTS of SHOAL. AWOIS 52534
Least Depth 5 fathoms

RECRD	**52739**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	O
		CARTOCODE	067	SNDINGCODE		DEPTH	

LAT83	56/01/22.68	LONG83	132/50/37.09	NATIVDATUM	06
LATDEC:	56.022966666667	LONDEC:	132.84363611111	GPQUALITY	Med
				GPSOURCE	Direct

PROJECT	OPR-O327-CH1-01	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	DAS	ASSIGNED	4/20/2001
TECNIQ	VS,ES,MB,DI				

Techniqnote

History

HISTORY
H09756/1978-- PMC HYDROGRAPHIC INSPECTION TEAM REPORT, ITEM 4(1 OF 8) : MANY SHOAL AREAS WERE NOT DEVELOPED. DEVELOPMENT OF THESE AREAS SHOULD BE CONSIDERED FOR ADDITIONAL FIELD WORK. (ENT DAS 04/20/2001)

Fieldnote

INVESTIGATION

DATE(S): 5/ 11 /01 (DN: 131)

HYDROGRAPHIC SURVEY NUMBER:H11058

VN: 2126 TIME: 22:37:35 to 22:38:03

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER)100% SWMB-Reson 8101

SURVEYED POSITION: LAT. 56/01/23.656"N LON.132/50/37.519"W (634387.67E, 6210763.29N

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY:Shoal areas were defined with 100% SWMB where depths were deep enough to allow safe navigation. Survey speed was limited to five knots to ensure coverage. The least depth, with raw observed tides applied, is 1.2 fathoms (LINE 118_2237, Ping #118, Beam #42) which agrees well with the charted (17401) 1.5 fathom sounding.

CHARTING RECOMMENDATION (HYDROGRAPHER): Chart least depth of shoal based on current hydrography.

EVALUATOR COMMENTS:Concur with clarification, chart 1 fathom at lat. 56/1/23.6N long. 132/50/37.5W

Proprietary

YEARSUNK NIMANUM

Print Record

RECRD	**52740**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	O
		CARTOCODE	067	SNDINGCODE		DEPTH	

LAT83	56/01/26.68	LONG83	132/50/46.09	NATIVDATUM	06
LATDEC:	56.024077777778	LONDEC:	132.84613611111	GPQUALITY	Med
				GPSOURCE	Direct

PROJECT	OPR-O327-CH1-01	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	DAS	ASSIGNED	
TECNIQ	VS,ES,MB,DI				

Techniqnote

History

HISTORY
H09756/1978-- PMC HYDROGRAPHIC INSPECTION TEAM REPORT, ITEM 4(2 OF 8) : MANY SHOAL AREAS WERE NOT DEVELOPED. DEVELOPMENT OF THESE AREAS SHOULD BE CONSIDERED FOR ADDITIONAL FIELD WORK. (ENT DAS 04/20/2001)

Fieldnote

INVESTIGATION

DATE(S): 5 / 10/01 (DN:129)

HYDROGRAPHIC SURVEY NUMBER:H11058

VN: 2125 TIME:See below

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

SURVEYED POSITION: See below

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY:The shoal area was developed with 100% SWMB. Survey speed was limited to five knots to ensure coverage. The following depths area corrected with raw observed tides.
A least depth of 0.3 fathoms (LINE100 2349, Ping #593 Beam #69, Time 16:22:48) was found over the shoal, slightly north from the charted 1.25 fathom sounding.
See graphic AWOIS_52740.doc

CHARTING RECOMMENDATION (HYDROGRAPHER):Chart the shoal based on current hydrography.

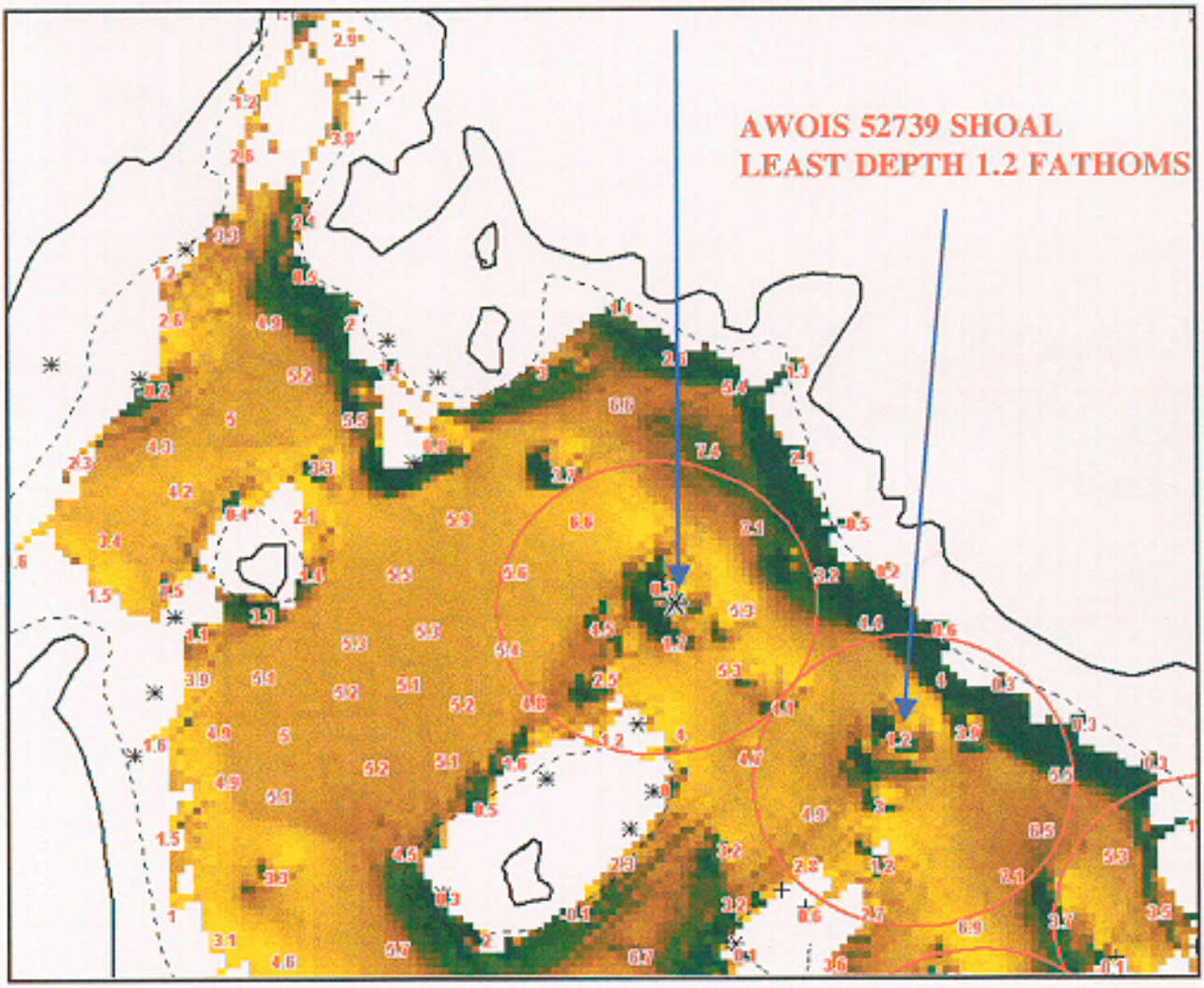
EVALUATOR COMMENTS:Concur with clarification, two rocks with a least depth of covered 2 ft at MLLW were found at the AWOIS position. Chart rocks at survey position, lat. 56/01/27.24N, long. 132/50/45.89W and lat. 56/01/26.77N, long. 132/50/45.41W.

Proprietary

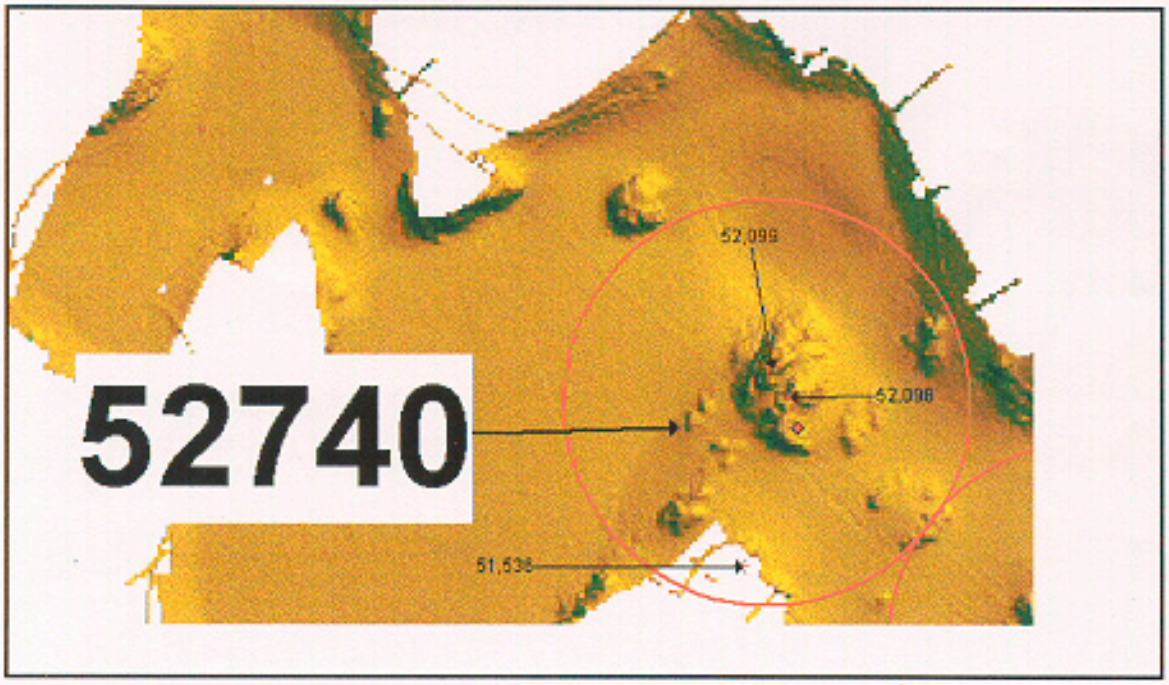
YEARSUNK NIMANUM

Print Record

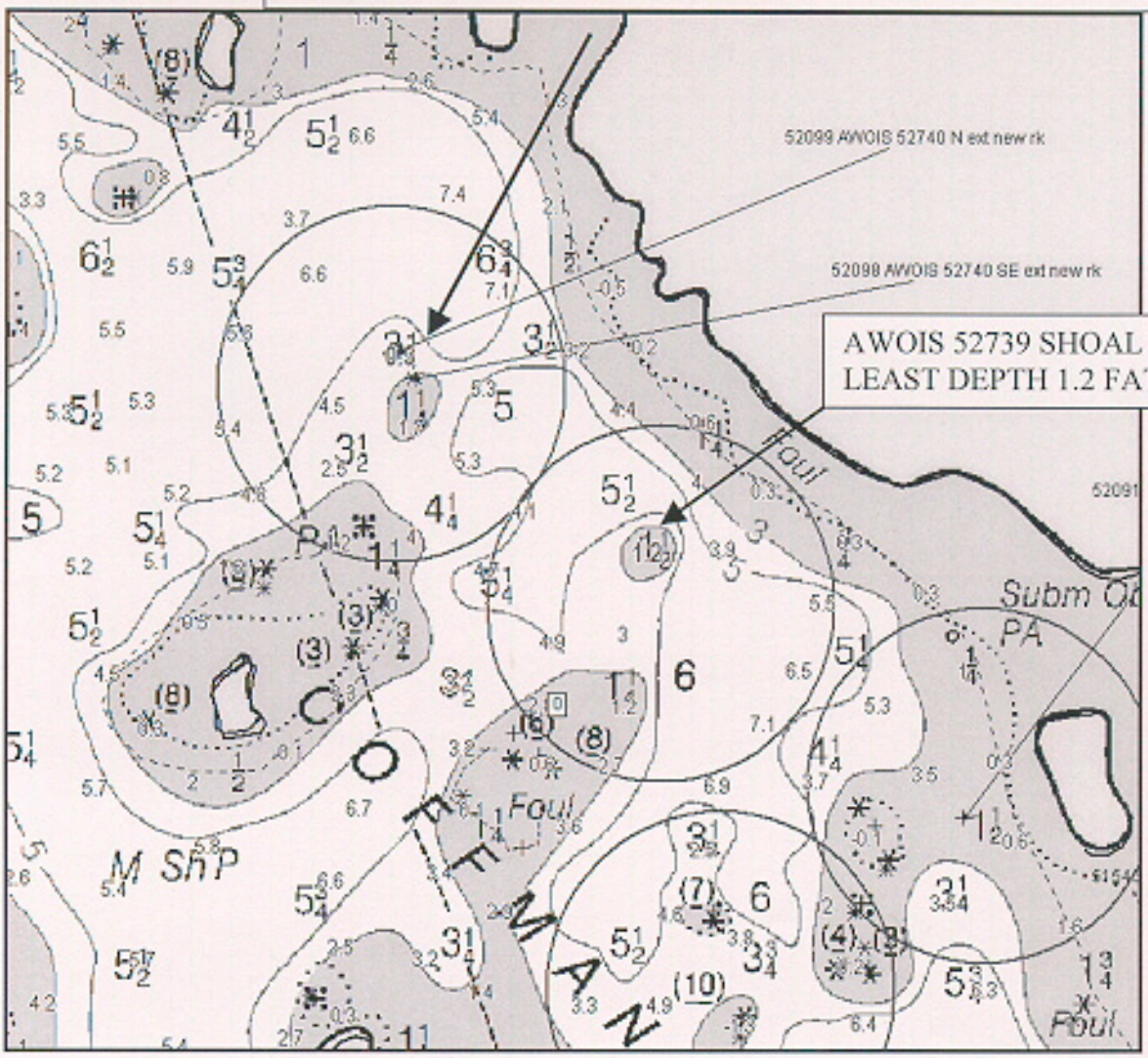
AWOIS 52740 NEW ROCK.
POSITION # 52098-52099
LEAST DEPTH 0.3 FATHOMS



AWOIS 52740 SHOAL AREA
DEVELOPED WITH 100%
SWMB



AWOIS 52740 NEW ROCK WITH LEAST DEPTH 0.3 FATHOMS IN VICINITY OF CHARTED 3 ¼-FATHOM SOUNDING AND 1 ¼-FATHOM SOUNDING.



AWOIS 52739 SHOAL WITH LEAST DEPTH 1.2 FATHOMS

RECRD	**52741**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	O
		CARTOCODE	067	SNDINGCODE		DEPTH	

LAT83	56/01/15.68	LONG83	132/50/35.09	NATIVDATUM	06
LATDEC:	56.021022222222	LONDEC:	132.84308055556	GPQUALITY	Med
				GPSOURCE	Direct

PROJECT	OPR-O327-CH1-01	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	DAS	ASSIGNED	4/23/2001
TECNIQ	VS,ES,MB,DI				

Techniqnote

History

HISTORY
H09756/1978-- PMC HYDROGRAPHIC INSPECTION TEAM REPORT, ITEM 4(3 OF 8) : MANY SHOAL AREAS WERE NOT DEVELOPED. DEVELOPMENT OF THESE AREAS SHOULD BE CONSIDERED FOR ADDITIONAL FIELD WORK. (ENT DAS 04/20/2001)

Fieldnote

INVESTIGATION

DATE(S): 5 / 09/ 01 (DN: 129)

HYDROGRAPHIC SURVEY NUMBER:H11058

VN: 2125 TIME:See below

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

SURVEYED POSITION: See below

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY:100% SWMB was obtained in areas where depths were deep enough to allow safe navigation.

CHARTING RECOMMENDATION (HYDROGRAPHER): Within the radius of AWOIS 52741, a charted (17401) rock was disproved with SWMB and differential GPS at the following location.

56/01/17.05"N, 132/50/35.27" (634,433.0E, 6,210,560.4N Time 16:05:05 Pos# 52095. The least depth recorded over the charted rock position with raw observed tides applied was 3.8 fathoms. The hydrographer recommends removing the rock from the chart 17401.
In addition, there were two charted (17401) rocks and on T-sheet rock within the radius of AWOIS 52741. These three features should be replaced with a reef with the following extents:

56/01/16.4064"N, 132/50/30.2208"W (634,521.0E, 6,210,543.2N) Time: 15:58:28 Pos #52094 (NE ext new reef)
56/01/16.0392"N, 132/50/30.0732"W (634,523.9E, 6,210,531.9N) Time 15:57:59 Pos #52093 (SE ext new reef)
56/01/16.1004"N, 132/50/30.9948"W (634,507.9E, 6,210,533.3N) Time 15:56:30 Pos #52092 (SW ext new reef)

An additional T-sheet and charted (17401) rock was verified within the radius of AWOIS 52741 at the following position: 56/01/14.78:N, 132/50/34.44"W (634,449.5E, 6210,490.8N Height 10 feet above MLLW. The hydrographer recommends retaining this rock on the chart and as depicted in the source shoreline.

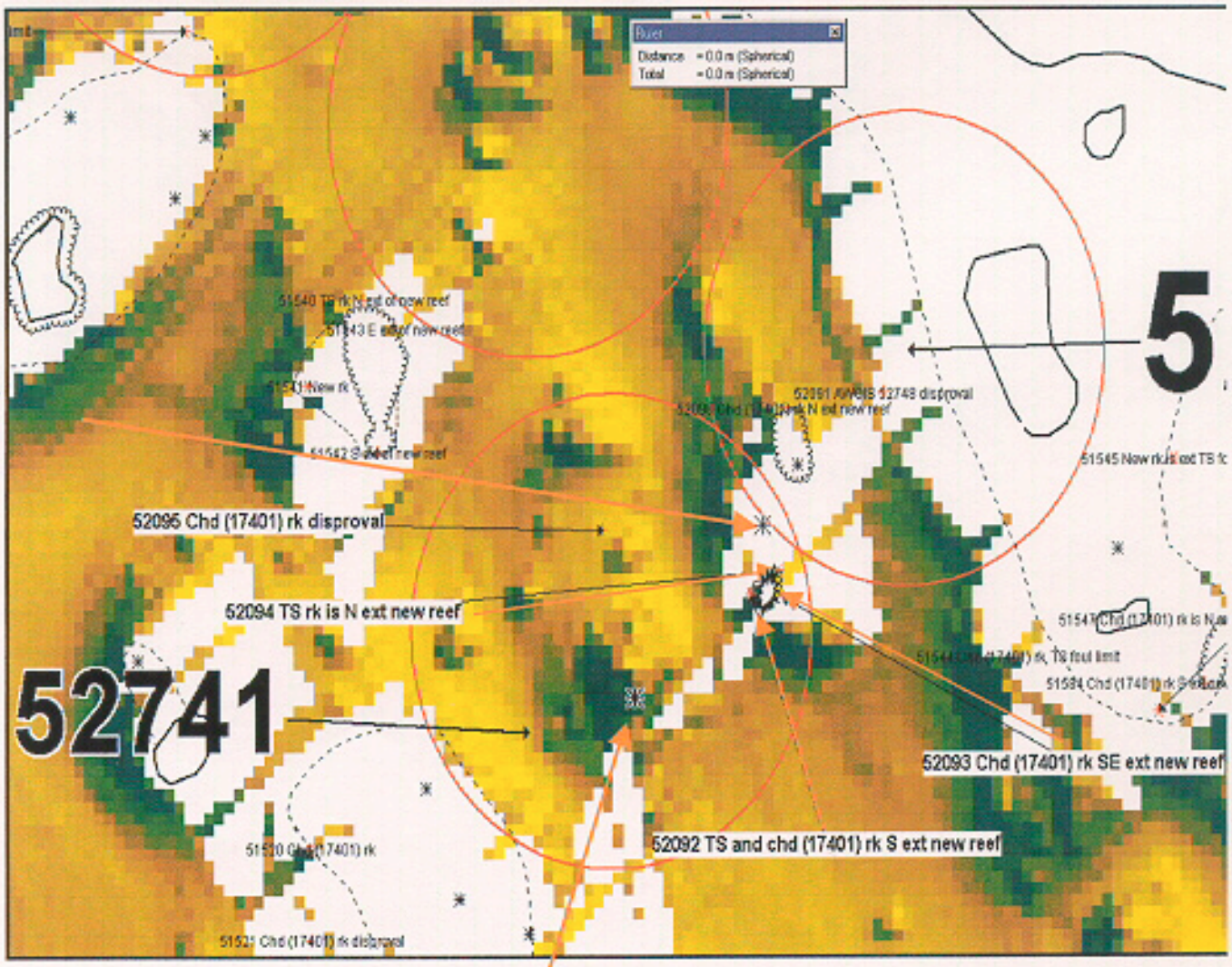
EVALUATOR COMMENTS:Concur, chart reef as positioned by the hydrographer. Remove charted rock at lat. 56/01/15.2N, long. 132/50/34.1W and chart rock at lat. 56/01/14.7N, long.132/50/34.4W.

Proprietary

YEARSUNK NIMANUM

Print Record

AWOIS 52741



TS rk is OK

TS rk is OK

RECRD	**52742**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	O
		CARTOCODE	067	SNDINGCODE		DEPTH	

LAT83	56/01/58.68	LONG83	132/50/1.1	NATIVDATUM	06
LATDEC:	56.032966666667	LONDEC:	132.83363888889	GPQUALITY	Med
				GPSOURCE	Direct

PROJECT	OPR-O327-CH1-01	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	DAS	ASSIGNED	4/23/2001
TECNIQ	VS,ES,MB,DI				

Techniqnote

History

HISTORY
H09756/1978-- PMC HYDROGRAPHIC INSPECTION TEAM REPORT, ITEM 4(4 OF 8) : MANY SHOAL AREAS WERE NOT DEVELOPED. DEVELOPMENT OF THESE AREAS SHOULD BE CONSIDERED FOR ADDITIONAL FIELD WORK. (ENT DAS 04/20/2001)

Fieldnote

INVESTIGATION

DATE(S): 05 /09 / 01 (DN:129)

HYDROGRAPHIC SURVEY NUMBER:H11058

VN: 2121 TIME:16:34

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

SURVEYED POSITION: LAT. 56/01/59.549"N LON.132/50/02.998"W (634,950.4E, 6,211,891.4N)

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY:The shoal area was developed with 100% SWMB. Survey speed was limited to five knots to ensure coverage. The least depth, with raw observed tides applied, is 8.6 fathoms (LINE 250_1634, PING #163, BEAM #81) which agrees well with the charted (17401) 9 fathom sounding.

See Mapinfo graphic 52742

CHARTING RECOMMENDATION (HYDROGRAPHER): Chart shoal based on current hydrography.

EVALUATOR COMMENTS:Concur

Proprietary

YEARSUNK NIMANUM

Print Record

RECRD	**52743**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	O
		CARTOCODE	067	SNDINGCODE		DEPTH	

LAT83	56/02/4.68	LONG83	132/49/51.1	NATIVDATUM	06
LATDEC:	56.034633333333	LONDEC:	132.83086111111	GPQUALITY	Med
				GPSOURCE	Direct

PROJECT	OPR-O327-CH1-01	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	DAS	ASSIGNED	4/23/2001
TECNIQ	VS,ES,MB,DI				

Techniqnote

History

HISTORY
H09756/1978-- PMC HYDROGRAPHIC INSPECTION TEAM REPORT, ITEM 4(5 OF 8) : MANY SHOAL AREAS WERE NOT DEVELOPED. DEVELOPMENT OF THESE AREAS SHOULD BE CONSIDERED FOR ADDITIONAL FIELD WORK. (ENT DAS 04/20/2001)

Fieldnote

INVESTIGATION

DATE(S): 05 /08 /01 (DN: 128)

HYDROGRAPHIC SURVEY NUMBER:H11058

VN: 2126 TIME:22:34

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

SURVEYED POSITION: LAT. 56/02/05.082"N LON.132/49/51.650"W (635,141.4E, 6,212,068.6N)

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY:The shoal area was developed with 100% SWMB. Survey speed was limited to five knots to ensure coverage. The least depth, with observed tides applied is 8.9 fathoms (LINE 278_2234, PING #173, BEAM #75) which agrees well with the chart (17401) 9.25 fathom sounding.

CHARTING RECOMMENDATION (HYDROGRAPHER):Chart shoal based on current hydrography.

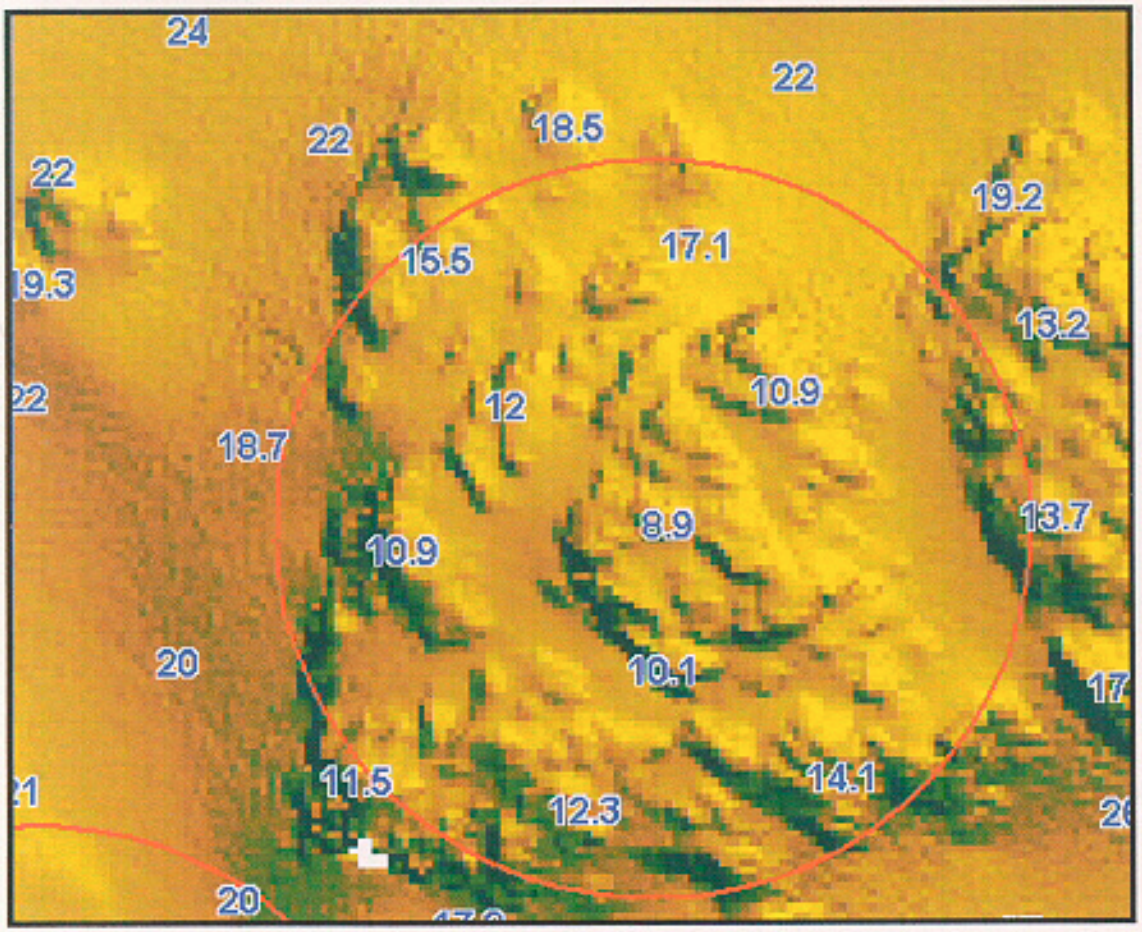
EVALUATOR COMMENTS:Concur

Proprietary

YEARSUNK NIMANUM

Print Record

AWOIS 52743 SHOAL COVERED WITH 100% SWMB. LEAST DEPTH 8.9 FATHOMS.



RECRD	**52744**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	O
		CARTOCODE	067	SNDINGCODE		DEPTH	

LAT83	56/02/10.68	LONG83	132/50/16.1	NATIVDATUM	06
LATDEC:	56.0363	LONDEC:	132.83780555556	GPQUALITY	Med
				GPSOURCE	Direct

PROJECT	OPR-O327-CH1-01	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	DAS	ASSIGNED	4/23/2001
TECNIQ	VS,ES,MB,DI				

Techniqnote

History

HISTORY
H09756/1978-- PMC HYDROGRAPHIC INSPECTION TEAM REPORT, ITEM 4(6 OF 8) : MANY SHOAL AREAS WERE NOT DEVELOPED. DEVELOPMENT OF THESE AREAS SHOULD BE CONSIDERED FOR ADDITIONAL FIELD WORK. (ENT DAS 04/20/2001)

Fieldnote

INVESTIGATION

DATE(S): 05 /09 / 01 (DN:129)

HYDROGRAPHIC SURVEY NUMBER:H11058

VN: 2121 TIME:15:52

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

SURVEYED POSITION: LAT. 56/02/05.082"N LON.132/49/51.650"W (634712.7E, 6,212193.1N)

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY:The shoal area was developed with 100% SWMB. Survey speed was limited to five knots to ensure coverage. The least depth, with raw observed tides applied is 12.5 fathom (LINE 158_1552, PING #2498, BEAM #85 is deeper than the charted (17401) 8.25 fathom sounding. This survey revealed an 8.2 fathom sounding approximately 80 meters to the west of the charted (17401) 8 1/4 fathom sounding.

See MapInfo graphic AWOIS 52744

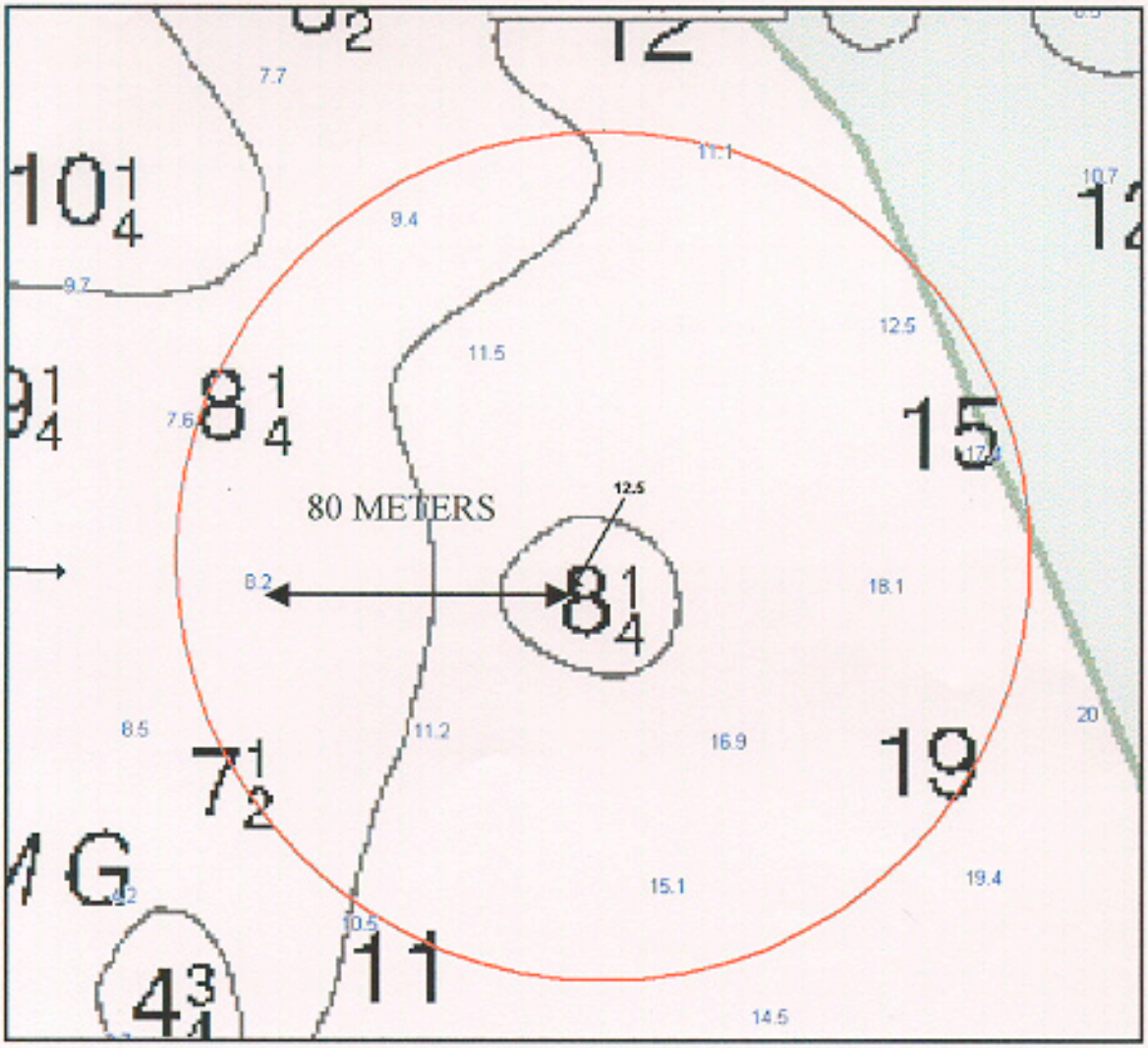
CHARTING RECOMMENDATION (HYDROGRAPHER):Chart shoal based on current hydrography.

EVALUATOR COMMENTS:Concur

Proprietary

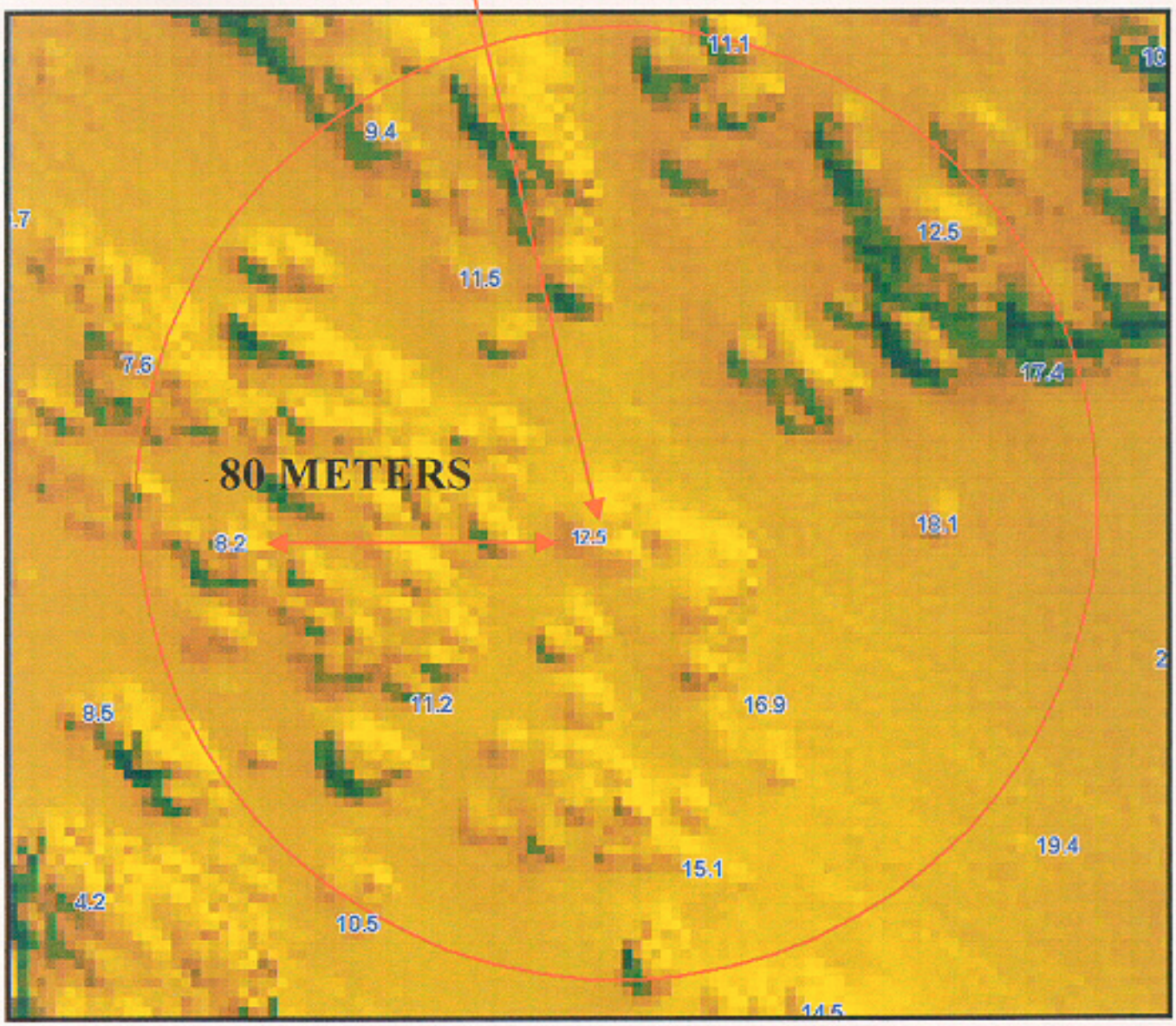
YEARSUNK NIMANUM

Print Record



AWOIS 52744 SHOAL AREA
COVERED WITH 100% SWMB.

AWOIS 52744 SHOAL
COVERED WITH 100% SWMB



RECRD	**52745**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	O
		CARTOCODE	067	SNDINGCODE		DEPTH	

LAT83	56/00/51.48	LONG83	132/50/12.79	NATIVDATUM	06
LATDEC:	56.0143	LONDEC:	132.83688611111	GPQUALITY	Low
				GPSOURCE	Direct

PROJECT	OPR-O327-CH1-01	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	DAS	ASSIGNED	4/23/2001
TECNIQ	VS,ES,MB,DI				

Techniqnote

History

HISTORY
BP106227/1966-- CHART MAINTENANCE PRINT REFLECTING ALL FIELD EDITS FOR SHORELINE MANUSCRIPT T-12403.
NM 29/80-- (SOURCE BP106227/66) ADD ROCK AWASH ENCLOSED BY DANGER CIRCLE AT LAT. 56-00-52.8, LON. 132-50-06.7. (ENT 04/23/2001 DAS)

Fieldnote

INVESTIGATION

DATE(S): 5 /09 /01 (DN: 129)

HYDROGRAPHIC SURVEY NUMBER:H11058

VN: 2125 TIME:16:56:32

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER) visual and echosounder

SURVEYED POSITION: LAT. 56/00/51.598"N LON. 132/50/12.699:W (634,848.3E, 6,209,785.9N)

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY:A 10 minute visual and star pattern echosounder search, 9LINE000_1639, Pos#52100-52124) was conducted for AWOIS 52745. A detached position (Pos# 52125 and 100% SWMB was acquired over the historical position of the reported rock awash; however due to the nature of the surrounding mud flat shoal and the stage of the tide (approx. -2.4ft), SWMB coverage did not encompass the inshore portion of the AWOIS radius. VBES data, (DN128, VN2125 LINES 106_2248 and 100_2234) were acquired where SWMB acquistion was not possible. SWMB revealed a least depth of 5.1 fathoms (DN 129,VN 2121, Ping#160, BEAM #11) in close proximity to the reported AWOIS rock. Survey speed limited to 5 knots to ensure coverage. A new rock (Pos.#52126) covering at 1.4 meters with raw observed tides was found approx. 130 meters SW of the reported rock awash.
Tide level at time of investigation was -2.4 feet.

CHARTING RECOMMENDATION (HYDROGRAPHER): Remove the rock from the chart, chart the new rock, and chart the area based on current hydrography.

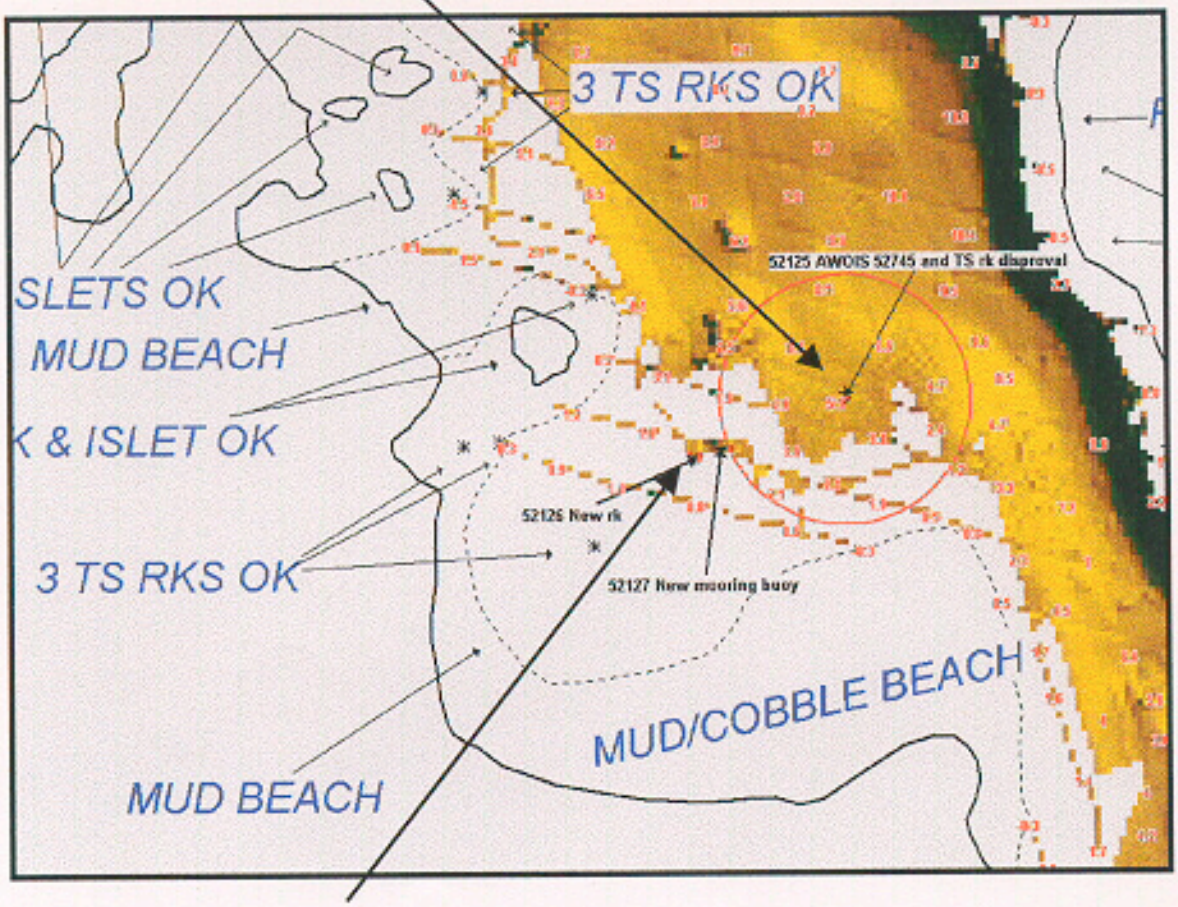
EVALUATOR COMMENTS:Concur

Proprietary

YEARSUNK NIMANUM

Print Record

AWOIS 52745 DISPROVAL



NEW ROCK POSITION #52126

RECRD	**52746**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	O
		CARTOCODE	067	SNDINGCODE		DEPTH	

LAT83	56/01/31.68	LONG83	132/49/38.09	NATIVDATUM	06
LATDEC:	56.025466666667	LONDEC:	132.82724722222	GPQUALITY	Med
				GPSOURCE	Direct

PROJECT	OPR-O327-CH1-01	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	DAS	ASSIGNED	4/23/2001
TECNIQ	VS,ES,MB,DI				

Techniqnote

History

HISTORY
H09756/1978-- PMC HYDROGRAPHIC INSPECTION TEAM REPORT, ITEM 4(8 OF 8) : MANY SHOAL AREAS WERE NOT DEVELOPED. DEVELOPMENT OF THESE AREAS SHOULD BE CONSIDERED FOR ADDITIONAL FIELD WORK. (ENT DAS 04/20/2001)

Fieldnote

INVESTIGATION

DATE(S): 5/ 9/01 (DN:)

HYDROGRAPHIC SURVEY NUMBER:H11058

VN:2121 TIME:18:44

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER)100% SWMB with Reson 8101

SURVEYED POSITION: LAT. 56/01/31.350"N LON.132/49/38.375"W (635,403.9E, 6,211,033.2N

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY:Shoal area defined with 100% SWMB. Survey speed was limited to ensure coverage. The least depth, with raw observed tides applied, is 9 fathoms (LINE# 174-1844 PING # 254 BEAM # 69) which agrees well with the charted (17401) 9.25 fathom sounding.

CHARTING RECOMMENDATION (HYDROGRAPHER):Chart shoal based on current hydrography.

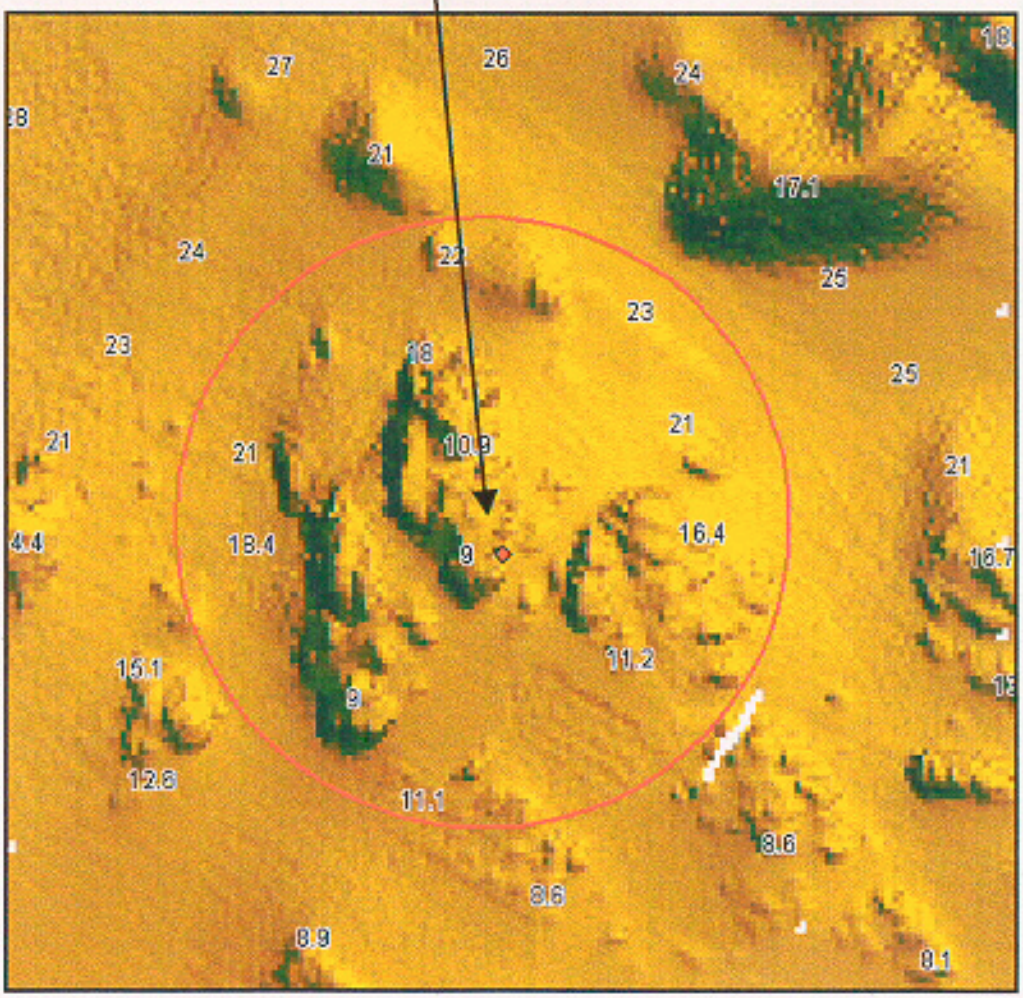
EVALUATOR COMMENTS:Concur

Proprietary

YEARSUNK NIMANUM

Print Record

AWOIS 52746 SHOAL AREA
DEVELOPED WITH 100% SWMB.
LEAST DEPTH 9 FATHOMS



RECRD	**52747**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	O
		CARTOCODE	067	SNDINGCODE		DEPTH	

LAT83	56/01/11.18	LONG83	132/49/51.59	NATIVDATUM	06
LATDEC:	56.019772222222	LONDEC:	132.83099722222	GPQUALITY	Med
				GPSOURCE	Direct

PROJECT	OPR-O327-CH1-01	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	DAS	ASSIGNED	4/23/2001
TECNIQ	VS,ES,MB,DI				
Techniqnote	Invesigate existence of fallen tree seaward of MHW shoreline				

History

HISTORY
H09756/1978-- PMC HYDROGRAPHIC INSPECTION TEAM REPORT, SECTION 1, CONTROL AND SHORELINE: FALLEN TREE AT LAT. 56-01-12.5N, LON. 132-49-45.5 OBSERVED DURING HYDROGRAPHY, NOTED IN THE RAW RECORDS BUT NOT ACCURATELY LOCATED. FEATURE PLOTTED ON SMOOTH SHEET DURING VERIFICATION FROM POSITION OF THE LAUNCH AT TIME OF OBSERVATION. (ENT DAS 04/20/2001)

Fieldnote

INVESTIGATION

DATE(S): 5 / 08 / (DN: 128)

HYDROGRAPHIC SURVEY NUMBER:H11058

VN: 2125 TIME:21:37:01

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

SURVEYED POSITION: LAT.56/01/10.76N LON.132/49/55.91 (635119.0E, 6210387.3N)

POSITION DETERMINED BY: DIFFERENTIAL GPS (Position #51813)

INVESTIGATION SUMMARY:A fallen tree was positioned at high water on the beach. Other logs were observed further up on the beach. The tree was located above the high water line on the beach. It looked as though it had been cut by a chain saw, the end was smooth. The Hydrographer believes that this fallen tree had at one time been in the water but no longer poses a threat to navigation. The surveyed position of the fallen tree 185 meters on shore of the survey position and above the MHWL.

CHARTING RECOMMENDATION (HYDROGRAPHER):The tree no longer poses a danger to navigation. Remove submerged obstruction PA annotation from chart 16701.

EVALUATOR COMMENTS:Concur

Proprietary

YEARSUNK NIMANUM

Print Record

RECRD	**52748**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	
		CARTOCODE		SNDINGCODE		DEPTH	

LAT83	56/01/19.38	LONG83	132/50/26.39	NATIVDATUM	06
LATDEC:	56.02205	LONDEC:	132.84066388889	GPQUALITY	Med
				GPSOURCE	Direct

PROJECT	OPR-O327-CH1-01	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	DAS	ASSIGNED	4/23/2001
TECNIQ	VS,ES,MB,DI				

Techniqnote

History

HISTORY
H09756/1978-- PMC HYDROGRAPHIC INSPECTION TEAM REPORT, SECTION 1, CONTROL AND SHORELINE: DEADHEAD AT LAT. 56-01-20.7N, LON. 132-50-20.3 OBSERVED DURING HYDROGRAPHY, NOTED IN THE RAW RECORDS BUT NOT ACCURATELY LOCATED. FEATURE PLOTTED ON SMOOTH SHEET DURING VERIFICATION FROM POSITION OF THE LAUNCH AT TIME OF OBSERVATION. (ENT DAS 04/20/2001)

Fieldnote

INVESTIGATION

DATE(S): 5 /9 / (DN:129)

HYDROGRAPHIC SURVEY NUMBER:H11058

VN: 2125 TIME:15:34:04

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER)Visual and echosounder search.

SURVEYED POSITION: LAT.56/01/18.8N LON.132/50/27.0W (634.574.3E, 6,210,617.9N)

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY:SWMB and VBES data were obtained in areas where depths where great enough to allow safe navigation. AWOIS deadhead was disproved with a 10 minute visual and echo sounder search, plus SWMB where deep enough for a launch. A detached position was taken over the reported position on the deadhead (Pos#52091). The survey launch ran a search pattern to shore. Water visibility was 4 meters and the bottom was flat sand and mud.

CHARTING RECOMMENDATION (HYDROGRAPHER):Hydrographer recommends removing the PA submerged obstruction from chart 17401

EVALUATOR COMMENTS:Do not concur, the hydrographer searched in the vicinity of the AWOIS position but the AWOIS position is not where the obstruction is charted. The correct position of the charted submerged obstruction PA is lat. 56/01/22.1N, long. 132/50/27.3W, NAD 83. After review of the descriptive report for prior survey H09756, the listed position of the deadhead PA (charted submerged obstruction PA) is incorrect. The position of the feature on the prior smooth sheet for H09756 is correct. The AWOIS position should be updated to reflect the correct position. Because an investigation was not completed at the charted position the obstruction should be retained.

Proprietary

YEARSUNK NIMANUM

Print Record

RECRD	**52749**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	O
		CARTOCODE	067	SNDINGCODE		DEPTH	

LAT83	56/00/38.98	LONG83	132/49/51.59	NATIVDATUM	06
LATDEC:	56.010827777778	LONDEC:	132.83099722222	GPQUALITY	Med
				GPSOURCE	Direct

PROJECT	OPR-O327-CH1-01	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	DAS	ASSIGNED	4/23/2001
TECNIQ	VS				
Techniqnote	Acquire high-resolution sounding data as near as possible to wharves, docks and pier faces in Coffman Cove and obtain positions for all navigationally significant features.				

History

HISTORY
H09756/1978-- PMC HYDROGRAPHIC INSPECTION TEAM REPORT, SECTION 5, CONTROL AND SHORELINE: FLOATING PIER AT AT LAT. 56-00-40.3N, LON. 132-49-45.5. HYDROGRAPHIC DATA (LAUNCH POSITIONS AND HYDROGRAPHER COMMENTS) AND THE RECOLLECTION OF INDIVIDUALS PRESENT IN THE SURVEY AREA INDICATE A CONFLICT WITH THE PORTRAYAL SHOWN ON THE CLASS I MANUSCRIPT. FEATURE PLOTTED ON SMOOTH SHEET DURING VERIFICATION FROM POSITION ON CLASS I MANUSCRIPT. (ENT DAS 04/20/2001)

Fieldnote

INVESTIGATION

DATE(S): 5/ 09/01 (DN: 129)

HYDROGRAPHIC SURVEY NUMBER:H11058

VN: 2125 TIME:18:25:26 to 18:33:31

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

SURVEYED POSITION: See below

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY: The floating pier was positioned during shoreline verification.

CHARTING RECOMMENDATION (HYDROGRAPHER):Revise the floating pier to the following positions:
56/00/41.778"N, 132/40/56.488"W (625138.5E, 6209491.1N) Time 18:25:26 Pos #52211 (North extent)
56/00/40.258"N, 132/49/57.291"W (635126.1E, 6209443.8N) Time 18:26:53 Pos #52212 (SWM extent)
56/00/40.302"N, 132/49/56.726"W (635135.8E, 6209445.4N) Time 18:33:31 Pos #52215 (NE extent)
56/00/39.643"N, 132/49/57.493"W (635123.2E, 6209424.6N) Time 18:28:49 Pos #52213 (SWM extent)
56/00/38.440"N, 132/49/57.277"W (635,128.1E,6209387.6)N) Time 18:30:43 Pos #52214 (South extent)

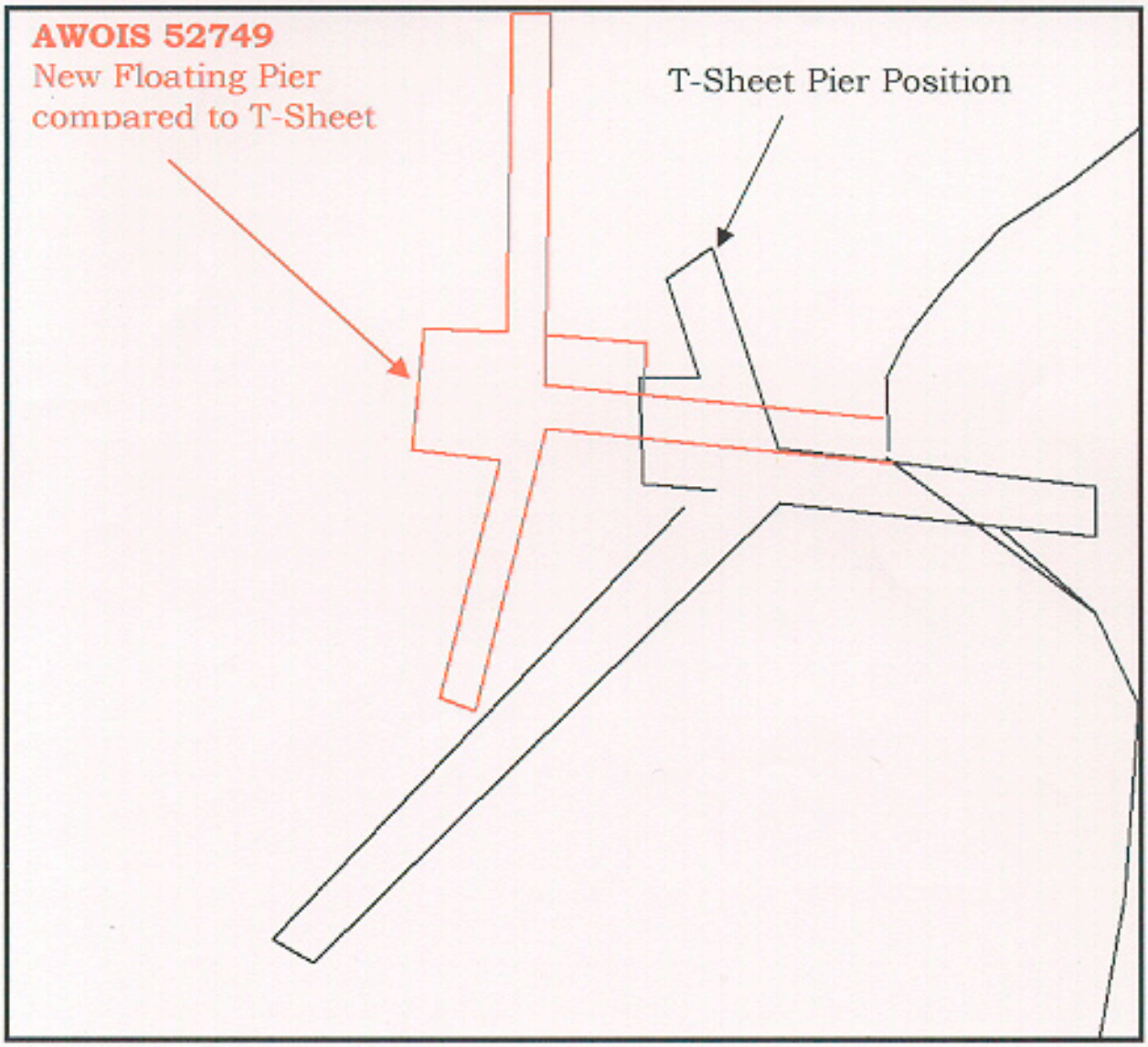
See digital photograph and MapInfo graphic AWOIS 52749

EVALUATOR COMMENTS:Concur

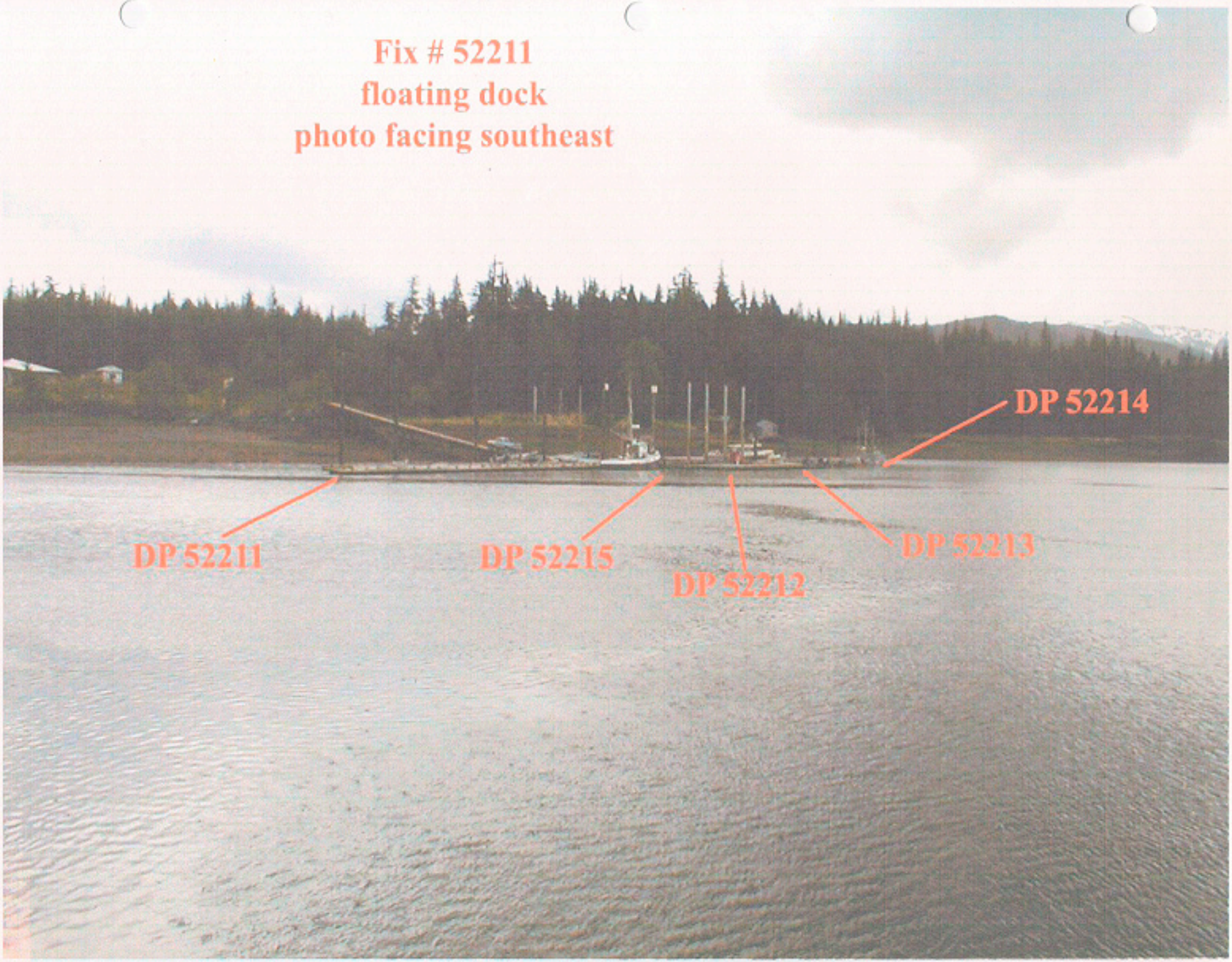
Proprietary

YEARSUNK NIMANUM

Print Record


AWOIS 52749
New Floating Pier
compared to T-Sheet
T-Sheet Pier Position

Fix # 52211
floating dock
photo facing southeast




Fixes # 52212, 52213 & 52215
floating dock extension
photo facing northeast
DP 52215
DP 52212
DP 52213

RECRD	**52750**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	O
		CARTOCODE		SNDINGCODE		DEPTH	

LAT83	56/02/50	LONG83	132/51/45	NATIVDATUM	06
LATDEC:	56.047222222222	LONDEC:	132.8625	GPQUALITY	Low
				GPSOURCE	Direct

PROJECT	OPR-O327-CH1-01	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	500	INIT	DAS	ASSIGNED	4/23/2001
TECNIQ	VS,ES,MB,DI				
Techniqnote	Verify charted shoreline of Beck Island and obtain a detached position for charted light.				

History

HISTORY
H09756/1978-- QUALITY CONTROL REPORT FOR H-9756, SECTION 1: THE COMMENTS PERTAINING TO THE SOURCES OF THE SHORELINE ARE CONSIDERED MISLEADING BECAUSE SHORELINE OF BECK ISLAND (VICINITY OF LAT 56-2.85N, 132-51.65W) IS NOT SHOWN ON T-12403. THE SHORELINE OF BECK ISLAND AS SHOWN ON THE FIELDSHEET IS CONSIDERED TO ORIGINATE WITH CHART 17401; HOWEVER, THE FIELD SHEET PORTRAYAL OF BECK ISLAND SHORELINE IS EXTREMELY DISPROPORTIONATE TO THAT SHOWN ON THE CHART. APPROPRIATE REVISIONS OF THE SHORELINE AT BECK ISLAND APPEARING ON THE SMOOTH SHEET WERE ACCOMPLISHED DURING QUALITY CONTROL INSPECTION. (ENT DAS 04/20/2001)

Fieldnote

INVESTIGATION

DATE(S): 5 / 09/01 (DN: 129)

HYDROGRAPHIC SURVEY NUMBER:H11058

VN:2125 TIME:22:47

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER)Echo sounder, VBES

SURVEYED POSITION: See below

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY:A VEBS high water buffer, (DN 129, VN 2125, LINE 001_2247) was conducted around Beck Island. The charted (17401) MLLW line surrounding Beck Island was actually ledge as noted in the field and on the DP&BS Plot in H11059 Shoreline_Updates. Beck Island Light was positioned with Differential GPS (DN 2125, Pos #52564 Lat. 56/02/51.705N, LON. 132/51/41.923W (633119.4 E, 6213447.9N) approximately 90 meters southeast from the position noted in the Light List Vol. VI. The aid to navigation (ATON) serves its intended purpose. The height of Beck Island Light was estimated at 8.5 meters using raw observed tides.
See MapInfo graphic 5275

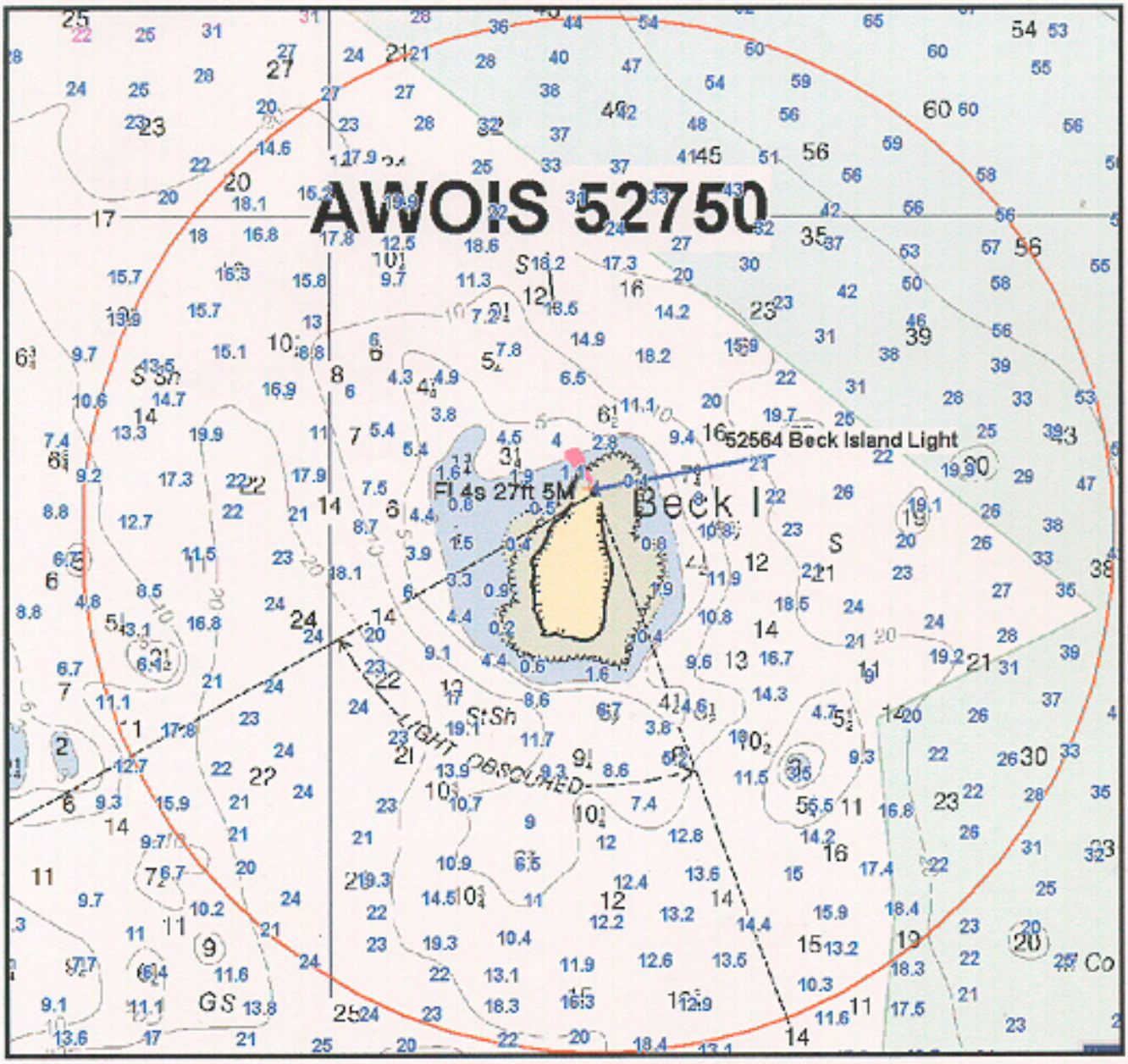
CHARTING RECOMMENDATION (HYDROGRAPHER):Retain Beck Island as charted and replace dotted MLLW line with ledge.

EVALUATOR COMMENTS:Concur with clarification, the evaluator recommends that MCD use the latest information to chart aids to navigation.

Proprietary

YEARSUNK NIMANUM

Print Record


AWOIS 52750
52564 Beck Island Light
Fl 4s 27ft 5M
Beck I
LIGHT OBSCURED

RECRD	**52751**	VESSLTERMS	OBSTRUCTION	CHART	17401	AREA	O
		CARTOCODE	067	SNDINGCODE		DEPTH	

LAT83	56/01/12	LONG83	132/49/07	NATIVDATUM	06
LATDEC:	56.02	LONDEC:	132.81861111111	GPQUALITY	Med
				GPSOURCE	Direct

PROJECT	OPR-O327-CH1-01	ITEMSTATUS	Assigned	SEARCHTYPE	Full
RADIUS	100	INIT	DAS	ASSIGNED	4/23/2001
TECNIQ	VS,ES,MB,DI				

Techniqnote

History

HISTORY
H09756/1978-- QUALITY CONTROL REPORT FOR H-9756, SECTION 2: THE FOUL AREA DEPICTED ON THE PHOTOGRAPH IN THE VICINITY OF LAT. 56-01.22N, OON. 132-49.02 WAS IMPROPERLY NOTED AS "RK" ON THE SMOOTH SHEET. THE LABEL "RK" IS DEFINED TO BE A PINNACLE WHICH RISES ABRUPTY FROM THE BOTTOM AND IS DEFINED AS A ROCK. IN THIS CASE THERE IS NO EVIDENCE THAT SUCH A FEATURE EXISTS. THE "RK" WAS REPLACED BY THE LABEL "FOUL" DURING QUALITY CONTROL. (ENT DAS 04/20/2001)

Fieldnote

INVESTIGATION

DATE(S): 5 / 08 / 01 (DN: 128)

HYDROGRAPHIC SURVEY NUMBER:H11058

VN: 2122 TIME:16:18 to 16:28

INVESTIGATION METHODS USED: (IE DI, 200% SIDE SCAN SONAR, ECHO SOUNDER)Echo sounder, SWMB, and Leadline

SURVEYED POSITION:Pos # 20063 (New Rk) Lat. 56/01/11.77N, Lon 132/49/07.13"W (635963.8E, 6210445.0N)
Pos # 20057 (Chd Rk) Lat. 56/01/9.81"N, Lon 132/49/00.99"W (636072.1E, 6210388.0N)
Pos. # 20058 (Chd Rk_ Lat. 56/01/10.73N, Lon. 132/49/02.67"W (636,042.1E,6210415.5N)

POSITION DETERMINED BY: DIFFERENTIAL GPS

INVESTIGATION SUMMARY:The least depth on a new rock of 1.9 meters was positioned (Pos.#20063) within the charted (17401) foul limits. There are two charted (17401) rocks (DN 128, VN 2122, Pos#'s 20057 and 20058) and a T-sheet foul area located in the vicinity of this rock. 100% SWMB was unable to be obtained throughout this AWOIS search radius due to the nature of the surrounding shoal.

CHARTING RECOMMENDATION (HYDROGRAPHER):The Hydrographer recommends expanding and repositioning the charted (17401) and TS Foul limit to include the three features mentioned above and chart based on the limits of hydrography and depicted on the DP&BS Plot under H11058 Shoreline_Updates.
See MapInfo Graphic AWOIS 52751.

EVALUATOR COMMENTS:Concur

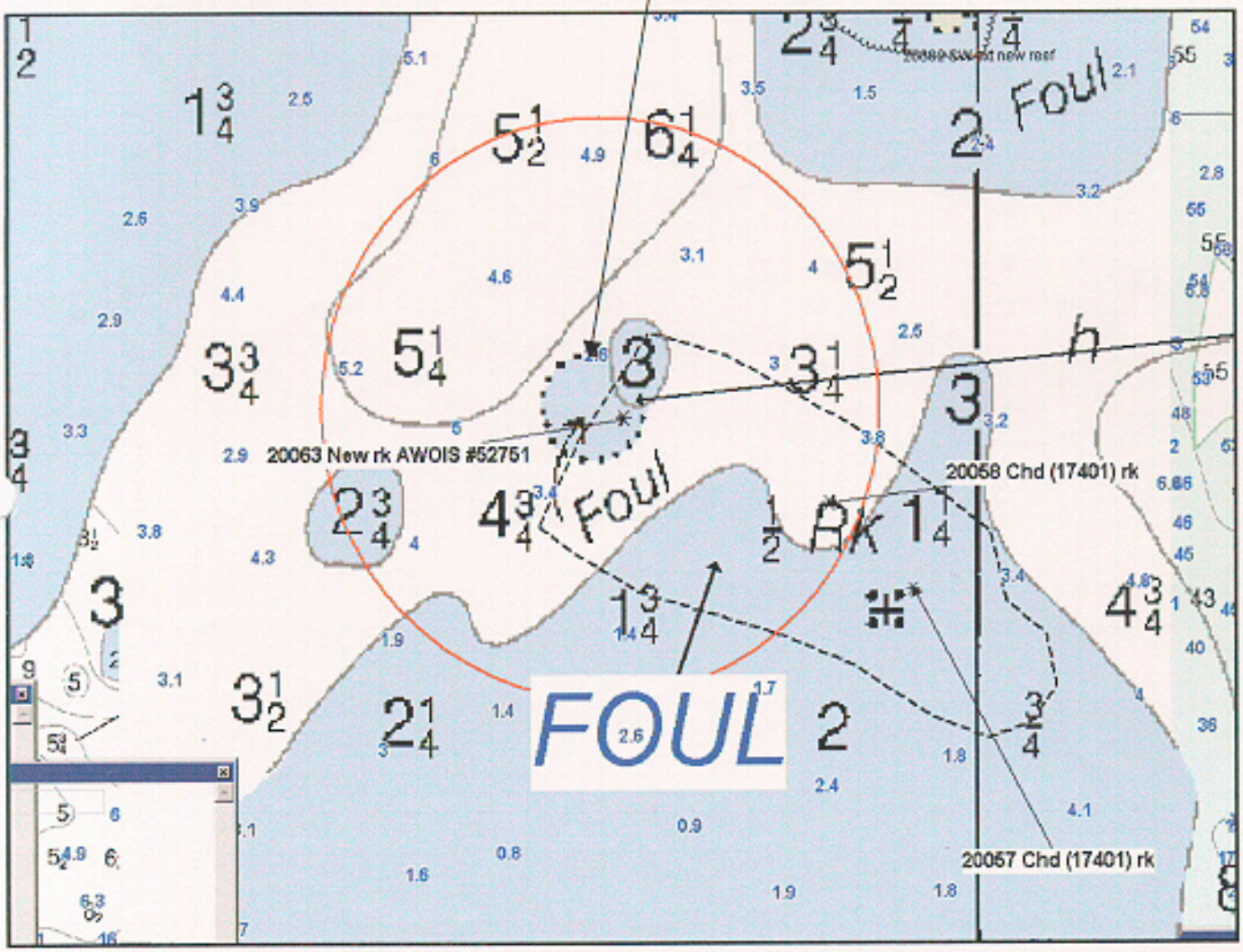
Proprietary

YEARSUNK NIMANUM

Print Record

AWOIS 52751

TS and Chd (17401) Foul Limit are new rock and extent of new foul limit



ADVANCE
INFORMATION

Hydrographic Survey Registry Number: H11058

Survey Title: State: Alaska Locality: Sub-locality: Lake Bay, Coffman Cove and Vicinity
Northern Clarence Strait and Zimovia Strait

Project Number: OPR-O327-RA-01

Survey Dates: May 8-May 15, 2001

Depths are reduced to Mean Lower Low Water using verified tides. Positions are based on the NAD83 horizontal datum, UTM Zone 8.

CHARTS AFFECTED:

Chart	Scale	Edition	Date
17382	1:40,000	14th	April 26, 1997
17401	1:10,000	10th	Sept 4, 1999

DANGERS:

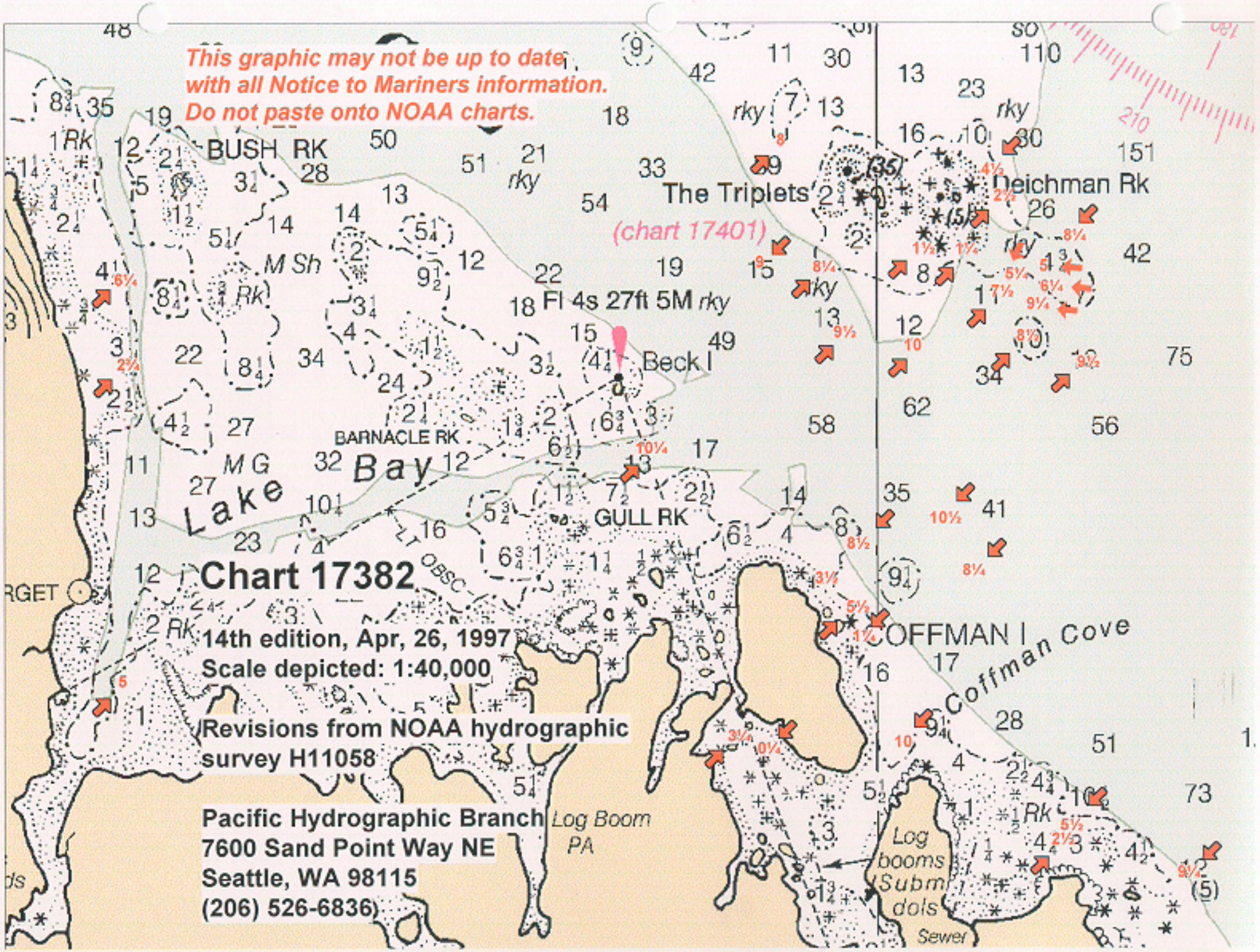
Feature	Depth(fms)	Latitude	Longitude
Sounding	0¼	56°01'27.119"N	132°50'45.805"W
Sounding	1¼	56°03'21.440"N	132°49'24.821"W
Sounding	1¼	56°01'52.793"N	132°50'06.940"W
Sounding	1½	56°03'21.510"N	132°49'42.424"W
Sounding	2½	56°01'06.206"N	132°48'45.498"W
Sounding	2½	56°03'33.587"N	132°49'09.065"W
Sounding	2¾	56°02'55.077"N	132°55'08.275"W
Sounding	3¼	56°01'30.046"N	132°50'57.996"W
Sounding	3½	56°02'06.090"N	132°50'22.317"W
Sounding	4½	56°03'39.609"N	132°49'13.971"W
Sounding	5	56°03'17.512"N	132°48'52.137"W
Sounding	5	56°01'42.675"N	132°55'09.481"W
Sounding	5¼	56°03'15.645"N	132°49'04.256"W
Sounding	5½	56°01'09.400"N	132°48'41.720"W
Sounding	5½	56°01'59.453"N	132°50'09.299"W
Sounding	6¼	56°03'12.786"N	132°48'49.886"W
Sounding	6¼	56°03'14.484"N	132°55'09.248"W
Sounding	7½	56°03'11.635"N	132°49'10.057"W
Sounding	8	56°03'46.381"N	132°50'39.797"W
Sounding	8¼	56°03'24.439"N	132°48'40.478"W

ADVANCE INFORMATION

Sounding	8¼	56°03'17.333"N	132°50'23.103"W
Sounding	8¼	56°02'07.829"N	132°49'21.944"W
Sounding	8½	56°02'13.949"N	132°50'09.171"W
Sounding	8½	56°03'01.487"N	132°48'59.747"W
Sounding	9	56°03'18.385"N	132°50'48.424"W
Sounding	9¼	56°03'08.778"N	132°48'55.576"W
Sounding	9¼	56°00'58.608"N	132°47'53.721"W
Sounding	9½	56°02'55.508"N	132°48'34.875"W
Sounding	9½	56°03'02.415"N	132°50'14.665"W
Sounding	10	56°02'59.387"N	132°49'44.876"W
Sounding	10	56°01'28.582"N	132°49'49.011"W
Sounding	10¼	56°02'35.932"N	132°51'32.813"W
Sounding	10½	56°02'19.859"N	132°49'32.483"W

COMMENTS:

Questions concerning this report should be directed to the Chief, (Pacific or Atlantic) Hydrographic Branch at *telephone # (206) 526-6836*


This graphic may not be up to date with all Notice to Mariners information.
Do not paste onto NOAA charts.
BUSH RK
The Triplets
(chart 17401)
Deichman Rk
Fl 4s 27ft 5M rky
Beck I
BARNACLE RK
Bay
Lake
GULL RK
COFFMAN I
Coffman Cove
Chart 17382
14th edition, Apr, 26, 1997
Scale depicted: 1:40,000
Revisions from NOAA hydrographic survey H11058
Pacific Hydrographic Branch
7600 Sand Point Way NE
Seattle, WA 98115
(206) 526-6836
Log Boom
PA
Log booms
Submdols
Sewer

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: August 31, 2001

HYDROGRAPHIC BRANCH: Pacific
HYDROGRAPHIC PROJECT: OPR-O327-RA-2001
HYDROGRAPHIC SHEET: H11058

LOCALITY: Lake Bay and Vicinity, N. Clarence Strait, AK
TIME PERIOD: May 8 - 15, 2001

TIDE STATION USED: 945-0938 Thorne Island, AK
Lat. 56° 3.5'N Lon. 132° 59.1'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 4.591 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: SA133 & SA135.

Refer to attachments for zoning information.

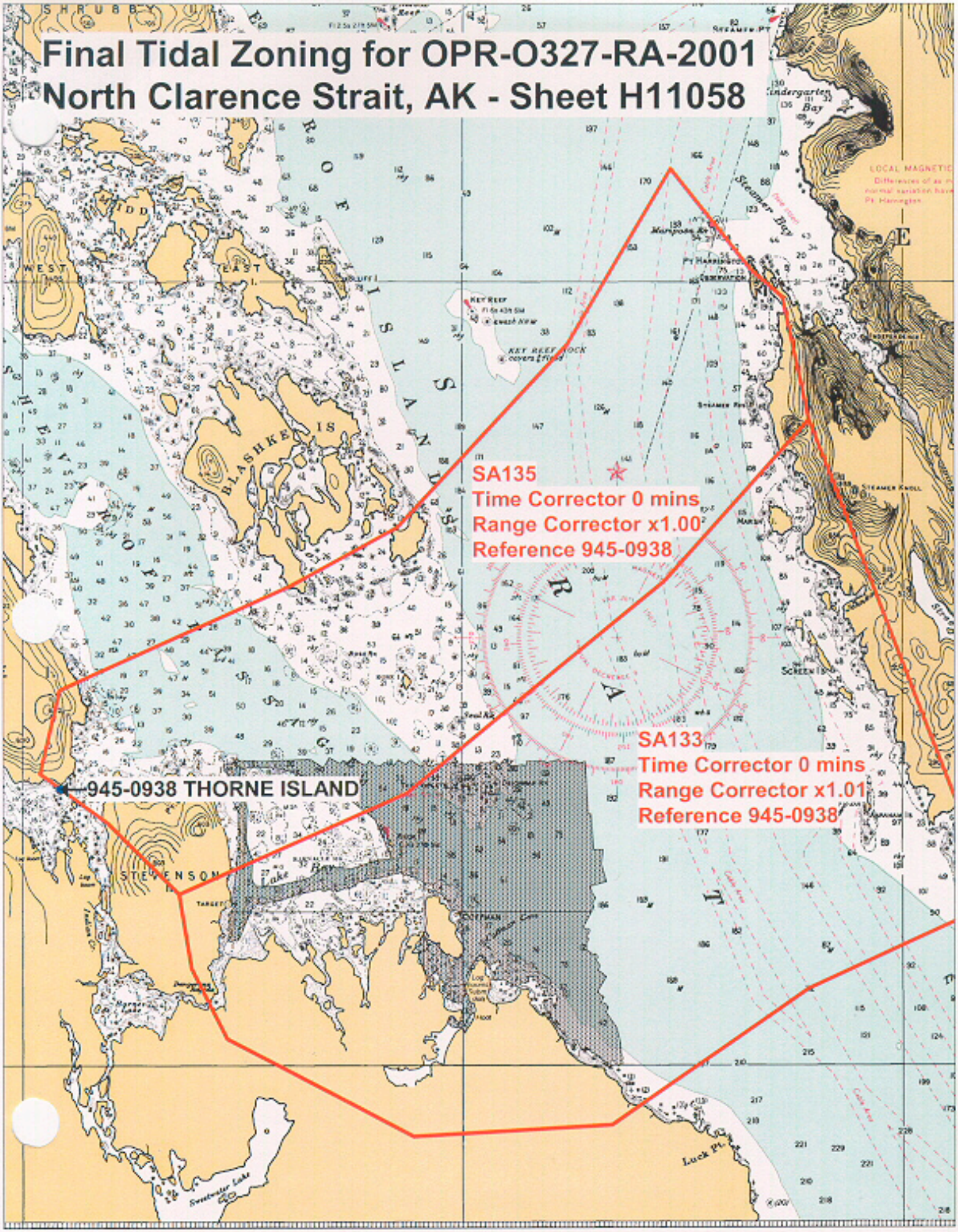
Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time.

For _____
CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION

Final tide zone node point locations for OPR-O327-RA-2001,
Sheet H11058.

Format: Longitude in decimal degrees (negative value denotes Longitude West),
Latitude in decimal degrees
Tide Station (in recommended order of use)
Average Time Correction (in minutes)
Range Correction

	Tide Station Order	AVG Time Correction	Range Correction
Zone SA133	945-0938	0	1.01
-132.702366 56.137339			
-132.647431 56.057432			
-132.628643 56.035361			
-132.702683 56.01629			
-132.776723 55.98725			
-132.85204 55.984858			
-132.922366 56.005644			
-132.935837 56.020737			
-132.940605 56.03656			
-132.854457 56.058053			
-132.757101 56.102834			
-132.702366 56.137339			
Zone SA135	945-0938	0	1.00
-132.7545 56.190477			
-132.793389 56.153346			
-132.85791 56.114418			
-132.89881 56.101862			
-132.985796 56.079959			
-132.99337 56.062176			
-132.967444 56.051652			
-132.940605 56.03656			
-132.854457 56.058053			
-132.757101 56.102834			
-132.702366 56.137339			
-132.712426 56.163369			
-132.724219 56.169029			
-132.7545 56.190477			


Final Tidal Zoning for OPR-O327-RA-2001
North Clarence Strait, AK - Sheet H11058
SA135
Time Corrector 0 mins
Range Corrector x1.00
Reference 945-0938
SA133
Time Corrector 0 mins
Range Corrector x1.01
Reference 945-0938
945-0938 THORNE ISLAND

APPROVAL SHEET
H11058

Initial Approvals:

The survey and associated records have been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The survey records and digital data comply with NOS requirements except where noted in the Descriptive Report and are adequate to supersede prior surveys and nautical charts in the common area.

Gary C. Nelson Date: 7 Dec 2005

Gary Nelson
Chief Cartographic Team
Pacific Hydrographic Branch

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

, CDR/NOAA Date: 7 DEC 2005

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

Corey Allen
AWOIS and SURF Check Complete
2005.12.13 16:01:10 -05'00'