

F00497

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-05-01-04

Registry No. F00497

LOCALITY

State Alaska

General Locality Wrangell Narrows

Sublocality Vicinity of Turn Point

2004

CHIEF OF PARTY

..... CDR John W. Humphrey, NOAA

LIBRARY & ARCHIVES

DATE

HYDROGRAPHIC TITLE SHEET

F00497

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-05-01-04

State Alaska

General Locality Wrangell Narrows

Sublocality Vicinity of Turn Point

Scale 1:5,000

Date of Survey 5/14/2004

Instructions Date 4/23/2004

Project No. S-0916-RA-04

Vessel NOAA Ship launches 1016 AND 1103

Chief of Party CDR. John W. Humphrey, NOAA

Surveyed by RAINIER Personnel

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

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 F00497

Project S-O916-RA-04

Petersburg, Alaska

Scale 1:5,000

May 2004

NOAA Ship RAINIER

Chief of Party: Commander John W. Humphrey, NOAA

A. AREA SURVEYED

This hydrographic survey was completed as specified by Hydrographic Survey Letter Instructions S-O916-RA-04, dated April 23, 2004, Standing Project Instructions dated March 2004, and NOS Hydrographic Specifications and Deliverables dated March 2003. The survey area is located around the Petersburg Ferry Terminal, Petersburg, AK. This survey corresponds to sheet "A" in the sheet layout provided with the Letter Instructions.

One hundred percent shallow-water multibeam (SWMB) coverage was obtained in the survey area.¹ Vertical-beam echo sounder (VBES) data was acquired in depths from 4 to 20 meters² to define the four-meter curve and to aid in the planning of SWMB data acquisition.

Data acquisition was conducted on May 14, 2004 (DN 135).

B. DATA ACQUISITION AND PROCESSING

A complete description of data acquisition and processing systems, survey vessels, quality control procedures, and data processing methods can be found in the OPR-O112-RA-04 *Data Acquisition and Processing Report* (DAPR), submitted under separate cover.³

Items specific to this survey, and any deviations from the aforementioned report, are discussed in the following sections.

B1. Equipment and Vessels

Data was acquired by RAINIER survey launches RA2 and RA4. Vessel RA4 was used to acquire shallow-water multibeam (SWMB) soundings and sound velocity profiles. Vessel RA2 was used to acquire VBES.⁴ There was no shoreline verification in this survey.⁵

No unusual vessel configurations were used for data acquisition.⁶

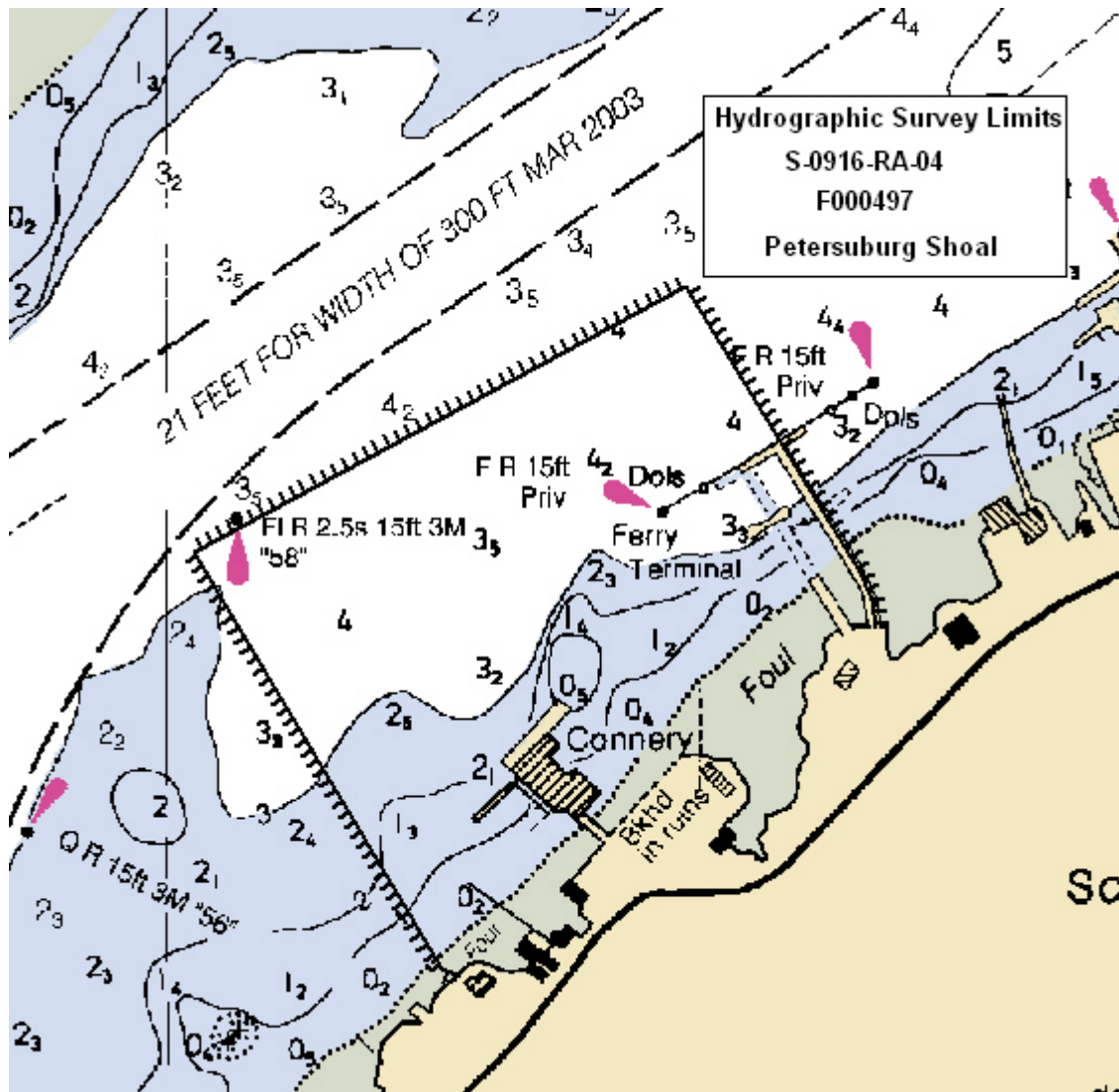


Figure 1. F00497 Survey Limits (chart 17375)

B2. Quality Control

Crosslines

Shallow-Water Multibeam crosslines totaled .37 nautical miles, comprising 4.3% of SWMB hydrography. The mainscheme bathymetry was manually compared to the crossline nadir beams in CARIS subset mode and agreed well, with differences averaging less than 0.5 meter.

A statistical Quality Control Report has been conducted on data representative data collected with each system used on this survey and is included in the OPR-O112-RA-04 DAPR. All systems collected data that met IHO order 1 specifications.⁷

Through manual examination and statistical analysis, accuracy standards have been met.⁸

Junctions

Survey F00497 has no junctions. ⁹

Data Quality Factors

No unusual conditions were encountered during the survey. ¹⁰

B3. Data Reduction

Data reduction procedures for survey F00497 conform to those detailed in the OPR-O112-RA-04 *DAPR*. ¹¹

C. VERTICAL AND HORIZONTAL CONTROL

Horizontal Control

The horizontal datum for this project is the North American Datum of 1983 (NAD83). Differential GPS (DGPS) was the sole method of positioning. Differential corrections from U.S. Coast Guard beacon Gustavus (288 kHz) were utilized during this survey.

Vertical Control

The vertical datum for this project is Mean Lower-Low Water (MLLW). The operating National Water Level Observation Network (NWLON) primary tide station at Ketchikan, AK (945-0460) served as control for datum determination and as the primary source for water level reducers for survey F00497.

All data were reduced to MLLW using unverified observed tides from station Ketchikan, AK using the tide file 9450460.tid and time and height correctors using the zone corrector file 0916RA2004CORP_rev.zdf.

The Pacific Hydrographic Branch will apply final approved (smooth) tides to the survey data during final processing. A request for delivery of final approved (smooth) tides for survey F00497 was forwarded to N/OPS1 on May 27, 2004. ¹² A copy of the request is included in Appendix IV. ¹³

D. RESULTS AND RECOMMENDATIONS

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

No AWOIS items were located within the limits of F00497 of this survey. ¹⁴

D.2 Chart Comparison

Survey F00497 was compared with chart 17375 (21st Ed. April 1, 2004, 1:10,000). ¹⁵

Chart 17375

Depths from survey F00497 were generally in agreement with chart 17375 within one-half fathom at the center of the charted soundings. ¹⁶

Final chart comparisons will be made at the Pacific Hydrographic Branch after the application of smooth tides. ¹⁷

The Hydrographer has determined that data accuracy standards and bottom coverage requirements have been met and survey data are adequate to supersede charted data in their common areas. ¹⁸

D.3 Shoreline

Shoreline Verification

Shoreline verification was not accomplished for F00497. ¹⁹

D.4 Dangers to Navigation

No dangers to navigation were located within the limits of F00497 of this survey. ²⁰

D.5 Aids to Navigation

No aids to navigation (ATON) were positioned within the limits of F00497 of this survey. ²¹

D.6 Miscellaneous

Bottom samples were not collected during this survey. ²²

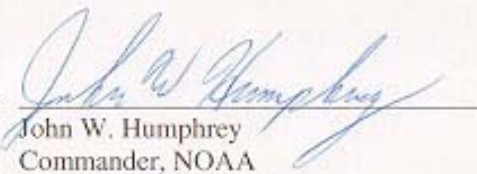
E. APPROVAL

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 2004.

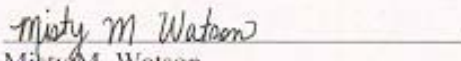
The digital data and supporting records have been reviewed by me, are considered complete and adequate for charting purposes, and are approved. All records are forwarded for final review and processing to N/CS34, Pacific Hydrographic Branch.

Survey F00497 is complete and adequate to supersede charted soundings in their common areas. No additional work is required for this survey. ²³

<u>Title</u>	<u>Date Sent</u>	<u>Office</u>
Data Acquisition and Processing Report for OPR-O112-RA-04	Nov. 12, 2004	N/CS34

Approved and Forwarded: 
 John W. Humphrey
 Commander, NOAA
 Commanding Officer

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

Survey Sheet Manager: 
 Misty M. Watson
 Ensign, NOAA

Field Operations Officer: 
 Kevin Slover
 Lieutenant, NOAA

Revisions Processed During Office Processing and Certification

¹ One hundred percent SWMB was obtained in the ninety-five percent of the survey area. The remaining five percent was covered by VBES.

² Change to zero to eight fathoms

³ Filed with the project records.

⁴ See endnote 1 and 2

⁵ Concur

⁶ Concur

⁷ Concur

⁸ Concur

⁹ Concur

¹⁰ Concur

¹¹ Concur

¹² A copy of the Tide Note, dated December 2, 2004 is attached to this report.

¹³ Filed with the hydrographic records.

¹⁴ Concur

¹⁵ Concur

¹⁶ Concur

¹⁷ A comparison after applications of approved tides was accomplished and is considered good. Three areas southwest of the Ferry terminal should be noted as to shoaling. These areas are listed below.

lat. 56/48/28.2N, long. 132/58/40.1W, the 3 fathom curve has move offshore approximately 20 meters.

lat. 56/48/25.3N, long. 132/58/46.3W, the 3 fathom curve has move offshore approximately 35 meters.

lat.56/48/25.3N, long. 132/58/51.5W, the 3 fathom curve has move offshore approximately 20 meters.

See the smooth sheet for the depiction of the areas.

¹⁸ Concur

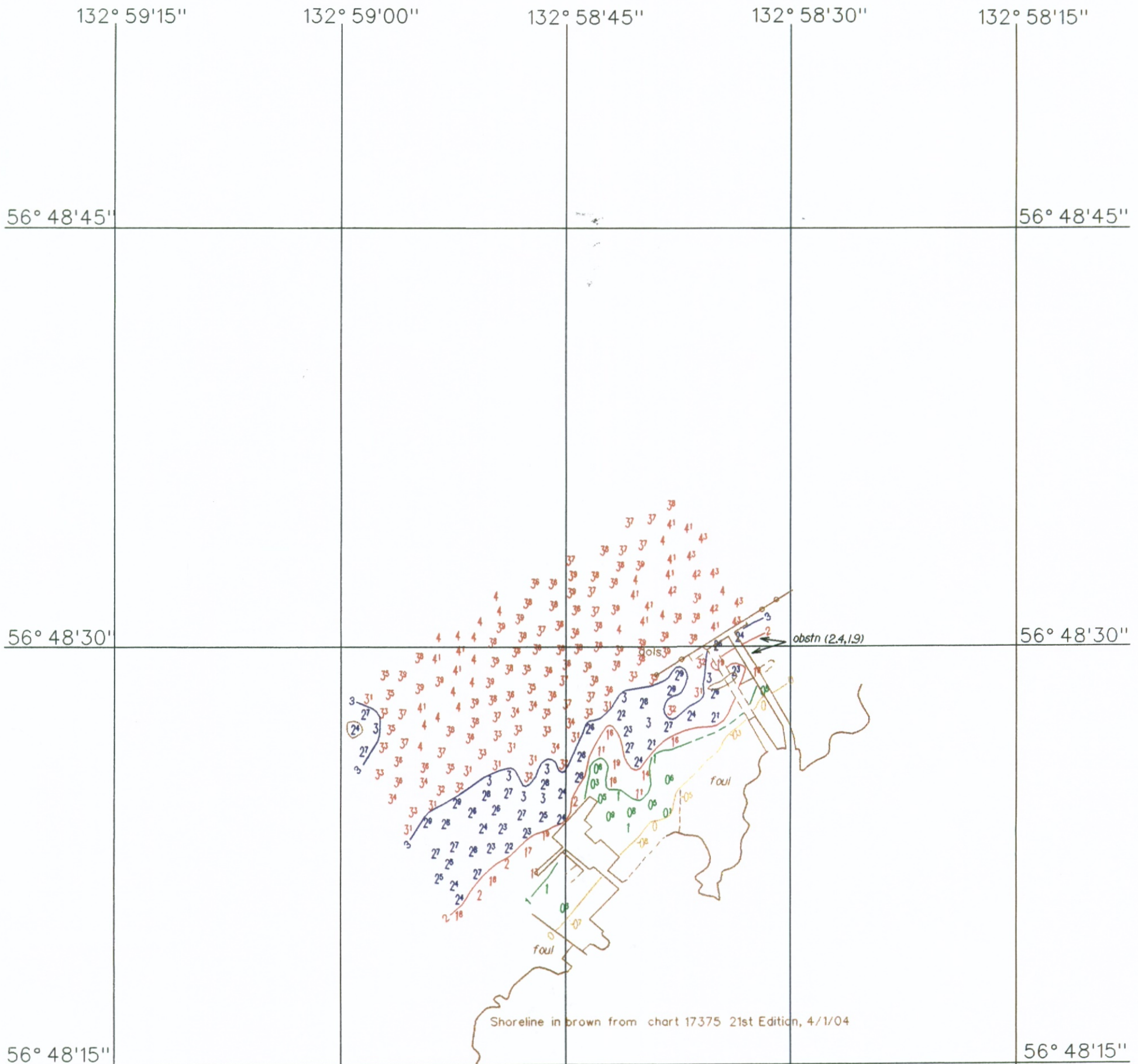
¹⁹ Concur, shoreline in brown from the 21st edition of chart 17375 was drawn on the smooth sheet for orientation purposes only

²⁰ Concur

²¹ The evaluator recommends that MCD use the latest information to chart aids to navigation.

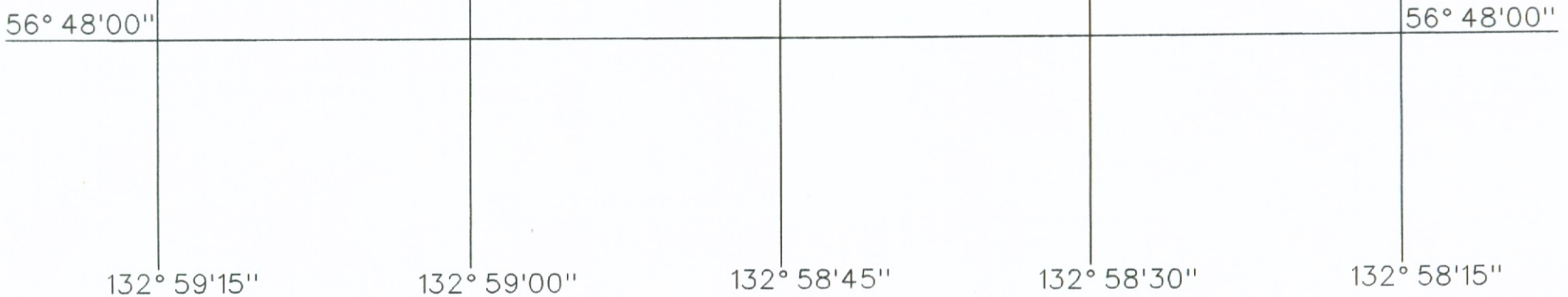
²² Concur, retain all bottom descriptions as charted in the common area.

²³ Concur



**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE**

F00497
 ALASKA, WRANGELL NARROWS
 VICINITY OF TURN POINT
 FIELD SHEET: RA-05-01-04
 DATE OF SURVEY: MAY 14, 2004
 SOUNDINGS IN FATHOMS
 DATUM: NAD 83
 PROJECTION: UTM
 CENTRAL MERIDIAN: 132°58'00"W
 SCALE 1:5,000 SCALE FACTOR: 0.9996





TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: December 2, 2004

HYDROGRAPHIC BRANCH: Pacific
HYDROGRAPHIC PROJECT: S-0916-RA-2004
HYDROGRAPHIC SHEET: F00497

LOCALITY: Vicinity of Turn Point, Wrangell Narrows, Alaska
TIME PERIOD: May 14, 2004

TIDE STATION USED: 945-0460 Ketchikan, Alaska
Lat. 55° 20.0'N Lon. 131° 37.5'W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 4.433 meters

REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: SA173

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).

Thomas V. Meyer 12/3/04

CHIEF, REQUIREMENTS AND DEVELOPMENT DIVISION



Final tide zone node point locations for S-O916-RA-2004, F00497

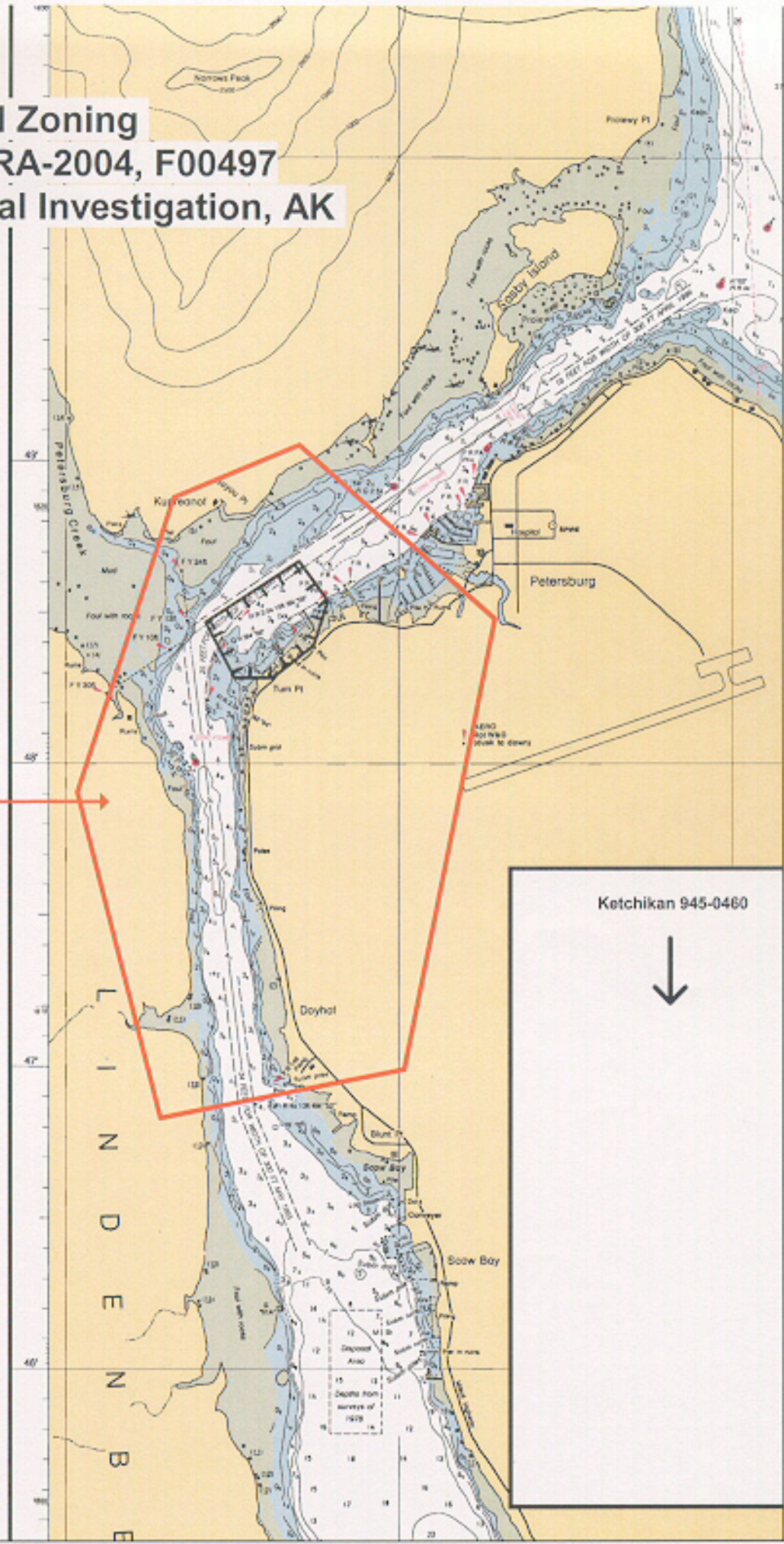
Format: Tide Station (in recommended order of use)
 Average Time Correction (in minutes)
 Range Correction
 Longitude in decimal degrees (negative value denotes Longitude West)
 Latitude in decimal degrees

	Tide Station Order	AVG Time Correction	Range Correction
Zone SA173	945-0460	+36	1.06
-132.957051 56.807983			
-132.966096 56.783155			
-132.990451 56.780479			
-132.998803 56.798434			
-132.989105 56.814645			
-132.976537 56.817527			
-132.957051 56.807983			

Narrow

Final Zoning for S-O916-RA-2004, F00497 Petersburg Shoal Investigation, AK

SA173
Time Corrector +36 mins
Range Corrector x1.06
Reference 945-0460




Ketchikan 945-0460

↓

APPROVAL SHEET
F00497

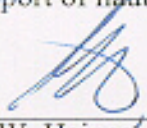
Initial Approvals:

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.


Bruce Olmstead
Cartographic Team
Pacific Hydrographic Branch

Date: 3/28/2007

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


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

Date: 4 APR 2007