

10263

Diagram No. 8802-3

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-5-2-87.....

Registry No. H-10263.....

LOCALITY

State Alaska.....

General Locality ... Bristol Bay.....

Sublocality Central Portion of.....

Nunavachak Bay.....

19 87

CHIEF OF PARTY
CAPT C.W. Fisher

LIBRARY & ARCHIVES

DATE June 15, 1988.....

☆U.S. GOV. PRINTING OFFICE: 1985-566-054

10263

Chrt 5
16315 } To Sign off, See Record
16011 } of Application

HYDROGRAPHIC TITLE SHEET

H-10263

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 5-2-87

State Alaska

General locality Bristol Bay

Locality Central Portion of Nunavachak Bay

Scale 1:20,000 (1:5,000 expansion sheet) Date of survey June 21-July 11, 1987

Instructions dated March 6, 1987 Project No. OPR-R184-RA-87

Vessel RAINIER S221 (2120); Launch RA-3 (2123)

Chief of party Carl W. Fisher, CAPT, NOAA

Surveyed by ENS O'Mara, ENS Meis

Soundings taken by echo sounder, ~~hand lead, pole~~ DSF6000N

Graphic record scaled by RAINIER Personnel

Graphic record checked by RAINIER Personnel

Evaluated by: A.A. Luceno Automated plot by PMC Xynetics Plotter

Verification by A.A. Luceno

Soundings in fathoms ~~feet~~ at ~~MLLW~~ MLLW and tenths of fathoms

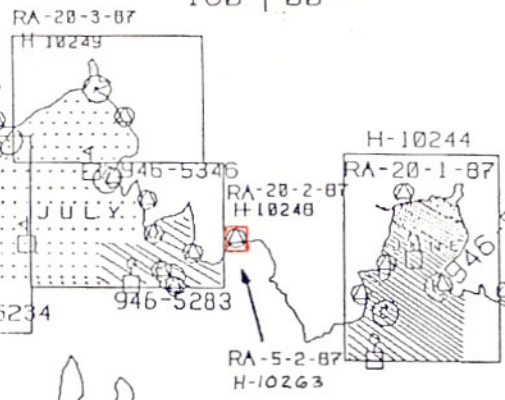
REMARKS: Revisions and marginal notes in black generated during office processing.
Separates are filed with the hydrographic data.

1327-97 AWOIS and SURF ✓ 9/88 RWD

162° 00'

160° 00'

From Chart 16011
scale 1:1,023,188
NAD 1927



PROGRESS SKETCH
 OPR-R184-RA-87
 HYDROGRAPHIC SURVEY
 TOGIAK BAY, ALASKA
 JUNE 7 - JULY 31

NOAA SHIP RAINIER
 CARL W. FISHER, CAPT. NOAA
 COMMANDING

JUN	JUL	AUG	SEP
81.4	122.7		
1108	1565		
460	988		
78	65		
10	8		
4	--		
—	3		
4	2		
15	11		
3	18		
1.65	2.97		
82	15.4		
1	1		

- SQ.N.M. Sounding
- L.N.M. Sounding
- L.N.M. Misc. Distance
- Bottom Samples (Grab)
- Electronic Control Stations
- Temp. Depth. Sound Velocity \odot
- Nansen Cast \square
- Tide Gages \odot
- Geodetic Control Stations
- Water Samples Analyzed
- SQ. N.M. Side Scan Sonar
- L.N.M. Side Scan Sonar
- Current Stations Occupied \odot

162° 00'

160° 00'

59° 00'

59° 00'

58° 00'

58° 00'

**Descriptive Report to Accompany
Field Examination ~~11-318~~
H-10263**

A. Project

A side scan sonar investigation of AWOIS 50928 was conducted as specified by Project Instructions OPR-R184-RA, dated March 6, 1987, Change Number 1, dated March 20, 1987, and Change Number 2, dated June 2, 1987. The investigation was conducted to verify or disprove a "wreck PA" as assigned in the AWOIS listing supplied with support data for the project (see Appendix XIII). It represents additional work on H-10220, Sheet T, a 1:20,000-scale survey conducted in 1986 as part of the same project. ✓

The wreck was reported in Local Notice to Mariners 21/80 (5/20/80) to be a 56-foot long blue landing craft sunk 0.5 mile offshore at approximate position $58^{\circ}52'N/160^{\circ}03'W$ in Nunavachak Bay. It was not found during the 1986 survey when mainscheme lines spaced at 200 meters were run throughout the bay and were split to 50 meters within a 0.5-nautical-mile radius of the position (see Section L of Descriptive Report H-10220 OPR-R184-RA-87). ✓

B. Area Surveyed

The investigation was located in northeast Bristol Bay, Alaska, approximately 16 nautical miles east-southeast of Togiak, Alaska. Nunavachak Bay is an embayment in the coastline of the southwest Alaska mainland and serves as an anchorage for vessels transitting and working in the area. ✓

The investigation covered a rectangular area encompassing a 0.75-nautical-mile radius around the charted position of the wreck. The boundaries for the area were:

North limit: $58^{\circ} 52' 47.0'' N$
South limit: $58^{\circ} 51' 16.0'' N$
East limit: $160^{\circ} 01' 30.0'' W$
West limit: $160^{\circ} 04' 45.0'' W$ ✓

The investigation was conducted from June 21 through July 11, 1987 (days 172-192).

C. Sounding Vessels

All data were acquired from a single automated survey launch, vessel 2123, hull number RA-3, with a Klein side scan sonar system in addition to the usual equipment configuration. ✓

D. Sounding Equipment and Corrections to Echo Soundings

The launch was equipped with Raytheon DSF-6000N echo sounder A117N. It was operated in the HIGH + LOW (HIGH DIGITIZED) function, using manual gain controls on both high and low frequencies to obtain the best analog trace. Soundings were recorded in fathoms and tenths of fathoms. Two-fathom bar checks were conducted and recorded daily, using both the LOW and the HIGH + LOW (HIGH DIGITIZED) functions, in accordance with the Provisional Instructions "RAYTHEON DSF-6000N ECHO-SOUNDER OPERATING AND PROCESSING INSTRUCTIONS," dated July 5, 1983, and the N/CG2 memorandum "DSF-6000N Depth Errors as a Function of Receiver Gain," dated May 23, 1986. ✓

Vessel 2123 is equipped with the Klein side scan unit described below. The unit was operated in accordance with the Provisional Side Scan Sonar Manual, dated April 25, 1986.

<u>Equipment</u>	<u>Model</u>	<u>Serial No.</u>
Recorder	521T	254
Transducer	422XS-101AF	410M

Corrections to Echo Soundings

Corrections to all soundings were determined for draft, sea conditions, velocity of sound through water, settlement and squat, and tides. However, in plotting the ~~final~~ field sheet, the determined correctors were applied only for draft, velocity, and sea conditions. Settlement and squat correctors were not applied. Predicted tide correctors were used in lieu of field-determined correctors, and the field tide records have been forwarded to N/OMA121, in accordance Hydrographic Survey Guideline #50 and the PMC OORDER. Variations in the instrument initial, stylus arm length, and belt tension are not present with the DSF-6000N. ✓

The scanning technique used in comparing the analog trace with the digital record was chosen to eliminate fluctuations greater than 0.2 fathoms resulting from sea action, while at the same time preserving the trend of this gently sloping bottom. ✓

Draft

A transducer depth of 0.3 fathom was measured for vessel 2123 on March 26, 1987, by divers using a large wooden T-square. The draft measurements were made at PMC with the fuel tanks between full and half full, and with zero, then four, people aboard. The average transducer depth of 0.3 fathom agrees with RAINIER historical records. The transducer is mounted starboard, midships, in a location such that all sounding corrections apply to both the low- and high-frequency echo-sounder signals. ✓

Velocity Correctors

A velocity cast was not made in Nunavachak Bay during this investigation. However, velocity correctors determined for nearby Kulukak Bay on day 153 during the survey H-10244 were shown to be 0.0 for shallow depths such as those found in the Nunavachak Bay investigation area (see Descriptive Report H-10244 OPR-R184-RA-87). Two Nansen casts were conducted for survey H-10248 immediately to the west of Nunavachak Bay. The casts were taken on days 197 (cast #6) and 212 (cast #9), in the days following the completion of this side scan investigation. Velocity correctors were determined to be zero for the range of sounding data gathered in Nunavachak Bay. Accordingly, soundings appearing on the semi-smooth plot have had a velocity corrector of 0.0 applied using velocity table #1. Data for the three casts mentioned above are ~~attached in Appendix IV~~ filed with the hydrographic data. ✓

Settlement and Squat

Settlement and squat correctors were determined for the automated survey launches in Seymour Canal, Alaska on April 28 and May 5, 1987, over hard bottom in a depth well exceeding seven times the vessel's draft. Both sea and wind were calm. Observations were made through a Zeiss Ni2 leveling instrument (S/N 87102) to a rod held vertically on deck of the launch, almost directly over the transducer. Five level readings were made at each speed tested, and the average taken, to compute the correctors. Tide staff readings were taken concurrently with each set of level readings, and all tide height differences were normalized to the tide height of the dead-in-the-water level readings before the correctors were computed. ✓

Soundings on the semi-smooth field sheet are not corrected for settlement and squat, and for vessel 2123 there is no corrector at any RPM. A TC/TI tape has been prepared and submitted with this investigation. Records of settlement and squat data are ~~included in Appendix IV~~ filed with the hydrographic data. ✓

Tide Correctors

The ~~final~~ field sheet is plotted using predicted tide correctors provided by the Project Instructions. Correctors were applied to the predicted tides at Black Rock, Walrus Islands, Bristol Bay (946-5182), provided by the Tides and Water Levels Branch (~~copies in Appendix XIII~~).
filed with the hydrographic data.

Applicable Area	Time Correction		Height Ratio
	High Water	Low Water	
East of 160° 20.0" W	+ 10 min	+ 10 min	x1.03

Field tide records and a request for approved tides have been submitted for NE Summit Island, Alaska (946-5283), which operated continuously throughout the investigation (see Field Tide Note ~~in Appendix XI~~ and Request for Approved Tides ~~in Appendix XI~~) *filed with the hydrographic data*

E. Hydrographic Sheets

The field sheets were all prepared aboard RAINIER, on a Houston Instrument Complot DP-3 roll plotter, using the PDP-8/e Hydroplot system and program RK201, "Grid, Signal, Lattice Plot". Program RK201 draws a modified transverse mercator projection. No 1:20,000-scale final field sheet was plotted, since these are supplemental "NSP" soundings to the plot prepared and submitted in 1986. A mylar position overlay was prepared at a scale of 1:5000 to check for adequate sidescan coverage and to plot contacts. A semi-smooth paper expansion sheet was also plotted at a scale of 1:5000 to permit examination of the soundings collected.

These and other preliminary plots and accompanying field records, along with this descriptive report, were originally forwarded in August, 1987, to the Pacific Marine Center for verification in conjunction with those for H-10220, submitted in 1986. The data and report were returned to the ship for further processing on September 30, 1987, and are being forwarded to the Pacific Marine Center for completion of verification as a ~~field examination, H-10220~~ *hydrographic survey H-10263*

F. Control Stations

Three geodetic stations were used to control the investigation, SUMMIT(108), NUNA(206), and RIGHT HAND(106). These stations were recovered unchanged from their condition during 1986. The same signal numbers were used as during

the survey H-10220. Information about these stations may be found in Descriptive Report H-10220 OPR-R184-RA-86. In addition, UNGALI, SUMMIT AZ, and DUCE were used during critical checks of the Mini-Ranger equipment. These stations are discussed in Descriptive Report H-10248 OPR-R184-RA-87.

SUMMIT and NUNA were used in a range/range configuration for most of the investigation. NUNA was also used for range/azimuth with RIGHT HAND as the initial.

All stations met third-order, class I standards for positioning and further information can be found in Horizontal Control Report OPR-O184-RA-86 and Horizontal Control Report OPR-O184-RA-87.

The North American Datum of 1927 and Clark Ellipsoid of 1866 were used as the reference in calculating geographic positions.

G. Hydrographic Position Control

Range/range and range/azimuth positioning methods were used on this investigation. Ranges were measured with Motorola's Mini-Ranger III electronic positioning system. Azimuths were measured with a Wild T-2 theodolite (S/N 73226).

Vessel 2123 was equipped with console/RT pair 720/B1405. Code 1 (C1883) was stationed at NUNA and Code 2 (B1106) was stationed at SUMMIT for the entire investigation. No difficulties were experienced with this equipment.

Opening baseline calibrations were conducted at Sitka, Alaska, in May, 1987. Closing calibrations were conducted in Seattle, Washington, in September, 1987. Baseline calibrations were conducted in accordance with the PMC OPORDER (see Electronic Control Report OPR-R184-RA-87). The results are summarized below.

Code	Opening		Closing	
	Corrector	SS Cutoff	Corrector	SS Cutoff
1	-3	7	-2	2
2	-1	6	-2	6

System checks were conducted in accordance with the PMC OPORDER, although some daily, non-critical checks were prevented by poor weather and resulting logistical difficulties. Three critical checks by theodolite intersection agreed within 2 meters of the opening baseline calibrations, meeting the requirements for a 1:5,000-scale survey (see summary of system checks in Appendix V).

All hydrographic data were plotted using the correctors determined by the opening baseline calibrations. Because of the good agreement obtained during critical checks, it is recommended that these same correctors be used for any subsequent processing. ✓

H. Shoreline

No shoreline exists in the area of investigation. ✓

There were no control stations located seaward of the shoreline during this investigation. ✓

I. Crosslines

A total of 4 nautical miles of crosslines were run, representing 4% of the mainscheme hydrography. In all cases crossline soundings agreed with mainscheme soundings within 0.3 fathom. A sample of 45 comparisons was made across the sheet. ✓

Crossline/Mainscheme Agreement

Within 0.1 fathom	76%
Within 0.2 fathom	96%
Within 0.3 fathom	100%

With no major discrepancies noted, agreement between mainscheme and crossline soundings was evaluated to be very good. ✓

J. Junctions

This investigation overlaps an area split to 50 meter line-spacing on H-10220. A sample of twenty junction sounding comparisons were made at locations where soundings directly overlapped. At all of these points junction agreement was within 0.3 fathom as shown below: ✓

Junction Sounding Agreement

Within 0.1 fathom	75%
Within 0.2 fathom	90%
Within 0.3 fathom	100%

K. Comparison With Prior Surveys

There were no prior surveys that covered the area of this investigation. ✓

L. Comparison With the Chart

Non-sounding Features

AWOIS 50928

This investigation was conducted to verify or disprove the wreck charted at 58°52'00"N/160°03'00"W on the following charts:

16315	3 rd Ed.	Feb 28/87	1:100,000	NAD 1927	✓
16011	31 st Ed.	Jun 29/85	1:1,023,188	NAD 1927	
16006	29th Ed.	Aug 23/86	1:1,534,076	NAD 1927	

The wreck is cited in AWOIS item 50928 (see copy of ~~item in~~ *Side Scan Contact Summary attached to this report*) Appendix XIII) as being a 56-foot long landing craft. No evidence of such a vessel could be found during a visual inspection of the shoreline or, during low tide, in scanning the shallow waters inshore from the search area. Since no records could be obtained establishing that the vessel had been removed or destroyed (see Section P); a side scan sonar investigation was conducted during seven days. ✓

The side scan sonar equipment was operated as described in the Provisional Side Scan Sonar Manual, dated April 25, 1986. Side scan confidence checks were made using the ship's anchor chain or hull daily. Although the water was relatively shallow in the search area (1.8 to 5.2 fathoms), a 4-meter towing height was obtainable in much of the area, permitting a 50-meter scanning range. The towing vessel operated nearly at idle, 1000 rpm. The towfish layback ranged from 1.3 to 8.6 meters. Choppy sea conditions necessitated lowering the towfish height at times, but the fish followed in the launch track at all times. ✓

A ^{2.25}~~1.5~~-square-nautical-mile area surrounding the AWOIS position was searched. Lines and arcs, roughly parallel to the bottom contours, were run over most of the area at 40-meter line spacing and with the range scale set at 50 meters. In the deepest area on the southern portion of the field sheet, some lines were run at 90-meter spacing with the range scale set at 100 meters. Bottom coverage of 200% was generally achieved, except in the shallower areas to the north and northwest, where coverage of 131% or better was achieved. In the southern part of the search area one pair of east-west lines achieved 160% coverage rather than 200%. ✓

No coverage was obtained in a 30 x 20 meter rectangle centered at 58°52'39.5"N/ 160°03'06.6"W. A side scan coverage abstract is included with the sonargrams. ✓

Although no evidence of a wreck was found, the gently sloping, smooth bottom was sprinkled with numerous isolated contacts. Five hundred and seventy seven contacts with apparent heights exceeding 10% of the depth were logged and plotted on the position overlay (see the contact list filed with the sonargrams). The fifteen most significant of these, with apparent heights of 1.5 to 2.1 meters (4.9 to 6.9 feet or 0.8 to 1.2 fathoms) and widths of up to 4 meters (13 feet), are summarized, ~~in Appendix VIII.~~ ✓

(attached to this report) Side Scan Contact Summary

The contacts were spread over the northern half of the search area, with the densest concentration in the two to four fathom depths near the shore to the northwest. They are most likely large boulders embedded in the bottom sediment. The widespread presence of these within the search area suggests that they are a characteristic of the bottom throughout Nunavachak Bay. ✓

M. Adequacy of Survey

This investigation, in conjunction with H-10220, is complete and adequate to be used for charting purposes, and to supersede any historical data. *(See section 9 of Eval. Report)* ✓

N. Aids to Navigation

There are no fixed or floating aids to navigation within the investigation area. ✓

O. Statistics

<u>EDP No.</u>	<u>Number of Positions</u>	<u>Nautical Miles of Sounding Lines</u>
2123	1441	97.4
SQUARE MILES OF HYDROGRAPHY		2.25
MILES OF SIDE SCAN		97.4
BOTTOM SAMPLES		NA

TIDE STATIONS	1
VELOCITY CASTS	0
DAYS OF PRODUCTION	7
MAGNETIC STATIONS	0
CURRENT STATIONS	0

P. Miscellaneous

An attempt was made to resolve the status of the reported wreck by determining the ownership of the vessel and obtaining documents describing its salvage or location. While determining the vessel's ownership, a valuable resource was discovered in the Marine Safety Evaluation Branch of the Marine Investigation Division, U. S. Coast Guard. The office maintains a computer-searchable inventory of vessel casualty reports from 1963 to the present. Correspondence with Lieutenant Commander T. Moniz, chief of that office, produced a copy of the vessel casualty report for the wreck in question, citing ownership and circumstances of the sinking (~~included in Appendix XIII~~).
attached to this report

The casualty report indicated that the wreck is the M/V SHOOTING STAR, sunk on May 12, 1980, and owned by Icicle Seafoods. Mr. Tom King, of Icicle Seafoods, was contacted and he attempted unsuccessfully to obtain an improved position for the wreck from company records. He stated that, to his knowledge, the vessel had not been salvaged. Icicle Seafoods' main office is at 4241 21st Ave. W, Seattle, Washington (206-282-0988).

During the summer of 1987, Mr. King flew over Nunavachak Bay at low altitude in a helicopter and during low tide. He saw no sign of the wreck. He suggested that Mr. Jeff Skrade, Chief Biologist for the Alaska Department of Fish and Game in Dillingham (907-842-5227), be contacted. Mr. Skrade believed the wreck to be located on the northeast side of the bay. He also suggested that the Alaska Department of Public Safety be contacted, since many vessels report dangers to them rather than the U. S. Coast Guard. The Kodiak office of the agency was called (907-486-4121) and Lieutenant Schwantes, of that office, provided additional information about the wreck.

The vessel SHOOTING STAR was tied to a barge, the BAY STAR, which ran aground at the time the SHOOTING STAR capsized. The BAY STAR has since been salvaged. The logbook of a nearby vessel, the VIGILANT, recorded that the SHOOTING STAR capsized in 15 feet of water. The captain of the VIGILANT

at the time was Captain Phillip Gilson, who works for the Department of Public Safety in Anchorage (907-269-5589). A letter was sent to him requesting that he provide an estimated position for the wreck on a copy of H-10220 (see Appendix XIII). At the time of this report, a response from him had not yet been received.

Q. Recommendations

The hydrographer considers field work on this investigation to be complete and recommends removal of the "wreck PA" symbol from its charted position. The office investigation should continue and further field work should not be undertaken unless an improved position for the wreck is obtained, preferably on a large-scale survey plot. A cautionary note should be charted stating that a wreck is reported approximately 0.5 nautical mile offshore in Nunavachak Bay.

*See sect. 9
of Eval.
Report*

✓

It is further recommended that a note be charted stating that boulders rising as much as 7 feet in height are scattered across the bottom of Nunavachak Bay. Consideration should be given to charting submerged rock symbols at the locations of the fifteen most significant contacts. ~~given in Appendix XIII~~. (See attached list)

*See sect. 9
of Eval.
Report*

R. Automated Data Processing

Data acquisition and processing were accomplished with a PDP 8/e Hydroplot computer system, using the standard programs.

Computer Programs Used For Data Processing

<u>NUMBER</u>	<u>DESCRIPTION</u>	<u>VERSION</u>
RK 112	HYPERBOLIC,R/R HYDROPLOT	3/01/86
RK 116	RANGE-AZIMUTH RTS	3/01/86
RK 201	GRID, SIGNAL, AND LATTICE PLOT	4/18/75
RK 221	COMB R/R & HYPER PLOT NON-RT	7/25/86
RK 226	RANGE-AZ POSN & SND PLOT NON-RT	7/25/86
RK 300	UTILITY COMPUTATIONS	10/21/80
RA 362	RK 330 AND AM 602 COMBINED	8/20/84
RK 407	GEODETC INVERSE/DIRECT COMP	9/25/78
RK 409	GEODETC UTILITY PACKAGE	9/20/78
AM 500	PREDICTED TIDE GENERATOR	11/10/72
RK 530	LAYER CORRECTIONS FOR VELOCITY	5/10/76
RK 561	H/R GEODETC CALIBRATION	12/01/82
RK 562	THEODOLITE CALIBRATION	9/05/84
AM 602	ELINORE - LINE ORIENTED EDITOR	12/08/82

RK 606	TAPE DUPLICATOR	8/22/74
AM 607	SELF-STARTING BINARY LOADER	8/10/80
RK 610	BINARY TAPE DUPLICATOR	1/31/85
RK 900	PLOT TEST TAPE GENERATOR FOR AM902	5/07/76
PM 901	CORE CHECK	3/01/72
AM 902	REAL TIME CHECKOUT	11/10/72
DA 903	DIAGNOSTIC-INSTRUCTION TIMER	2/27/76
RK 905	HYDROPLOT CONTROLLER CHECKOUT	3/18/81
RK 935	HYDROPLOT HARDWARE TESTS	3/15/82
RK 950	HARDWARE TESTS (DOCUMENTATION ONLY)	6/02/75

During field work, data tapes and field records were labeled "NSP" for the purpose of inclusion with data from the 1986 survey. Since the data are being processed as a separate field examination, all notations of "NSP" on the data tapes and field records should be ignored. *concur* ✓

S. Referral to Reports

The following reports contain additional information relevant to this investigation.

Supplemental Reports

<u>TITLE</u>	<u>DATE SENT TO MARINE CENTER</u>
Descriptive Report H-10220, OPR-R184-RA-86	December, 1986
Horizontal Control Report, OPR-R184-RA-86	December, 1986 ✓
Electronic Control Report, OPR-R184-RA-87	October, 1987
Horizontal Control Report, OPR-R184-RA-87	October, 1987

Respectfully Submitted,

Christine W. Schomaker
Christine W. Schomaker
LCDR, NOAA

July 23, 1987

FIELD TIDE NOTE OPR-R184-RA-87

Field-tide reduction of soundings was based on predicted tides computed with program AM 500, Predicted Tide Generator, by using the predicted tides for Black Rock, Walrus Islands, Bristol Bay tide station (946-5182) provided by the Sea and Lake Levels branch of the National Ocean Service (attached). The correctors that were used for Nunavachak Bay are as follows:

Time Correction		Height
<u>High Water</u>	<u>Low Water</u>	<u>Ratio</u>
+0hr 10min	+0hr 10min	x1.03

Tide station information follows:

N.E. SUMMIT ISLAND, ALASKA (946-5283)

Geographic Locale- Lat: 58⁰ 50.0' N, Long: 160⁰ 11.3' W.

Installation Date- June 9, 1987

Removal Date- Not yet removed.

Gage Type- Bristol Bubbler (S/N 64A-11030). There was a backup Bristol Bubbler, (S/N 67A-10292), which was installed at the same time. The gages were placed inside a small wooden shed approximately ten feet above the high water line.

Staff- The staff was constructed from aluminum angle iron with 4-inch webs. It was secured to a rock ledge 100 feet east of bench mark 5283 D with lag bolts. The scale was standard vitrified mounted to the staff. The staff stop was a stainless steel hex machine bolt located at 18.100 feet on the staff. On June 30, 1987, it was discovered that the staff had been blown down in heavy weather and on July 7, 1987, the staff was recovered and replaced.

Staff Zero/Gage Zero- For S/N 64A-11030: 2.0 ± 0.1 feet
For S/N 67A-10292: 3.2 ± 0.1 feet

Gage Time- Universal Coordinated Time

Bench Marks- Five bench marks were connected by the initial and final leveling. They are: 5283 A 1986, 5283 B 1986, 5283 C 1986, 5283 D 1986, 5283 E 1986.

Levels- Installation levels were run on June 9, 1987, connecting four of the five bench marks mentioned above. On July 7 1987 the levels, connecting all five bench marks, were rerun in conjunction with the replacement of the staff on July 7, 1987.

Marigram Records-

GAGE # 64A-11030: The marigram records are continuous from 6/11/87 at 0106 Z, until 6/26/87 at 1530 Z when the gage ran out of paper. Paper was replaced and records are continuous until at least July 22, 1987.

GAGE # 67A-10292: The marigram records are continuous from 6/11/87 at 0106 Z until 6/17/87 at 1620 Z and from 6/17/87 at 1741 until 6/29/87 at 2318 Z when the paper was replaced. Records are continuous from then until at least July 22, 1987.

Station Problems-On July 17, 1987, the chart drive(S/N 518515) in gage 67A-10292 was replaced with a new chart drive (S/N 513628) due to a problem with the take-up spool. On June 30, 1987, the staff was discovered to have been blown down in heavy weather. On July 7, 1987, the staff was recovered and replaced. During the period between June 30, 1987, and July 7, 1987, no hydrographic surveying was conducted.

MASTER STATION LISTING

QPR-R184-RA-87, TOGIAK BAY, ALASKA

VERSION 7/23/87

106 3 58 46 12764 159 54 28445 250 0075 000000
/RIGHT HAND 1948

108 3 58 49 45084 160 11 15727 250 0240 000000
/SUMMIT 1948

~~120 3 50 52 07204 160 09 46645 250 0004 000000~~
~~/UNCALI~~

~~201 3 50 50 49077 160 13 15720 250 0151 000000~~
~~/SUMMIT AZ~~

206 3 58 52 49515 160 04 41818 250 0014 000000
/NUNA

~~207 3 50 53 19525 160 14 32903 250 0007 000000~~
~~/BUCE~~



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Center
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102-3767

MAR 2 1988

N/MOP21x2/JM

Commander (OAN)
Seventeenth Coast Guard District
P.O. Box 3-5000
Juneau, Alaska 99802

Dear Sir:

During the office review of hydrographic survey H-10263, Alaska, Bristol Bay, Nunavachak Bay to Right Hand Point, a change was noted (see below) which affects the following charts:

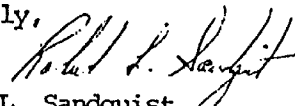
16006 (29th ed., 08/23/86; datum: NAD 27)
16011 (31st ed., 06/29/85; datum: NAD 27)
16315 (3rd ed., 02/28/87; datum: NAD 27)

Questions concerning the survey may be directed to Cdr. Thomas W. Richards, Chief, Nautical Chart Branch, telephone (206) 526-6835.

The following statement is recommended for inclusion in the Local Notice to Mariners; depths are MLLW:

"Rocks and boulders have been reported throughout Nunavachak Bay, in northern Bristol Bay, projecting 3 to 7 feet off the bottom. Depths within Nunavachak Bay may be 0.5 to 1.2 fathoms less than charted, due to these obstructions."

Sincerely,


Robert L. Sandquist
Rear Admiral, NOAA
Director, Pacific Marine Center

ATTACHMENT A



TOGIAR BAY, ALASKA

UPDATED AUGUST 4, 1987

OPR-R184-RA-87

WILL BE IDENTIFIED AND LD AND GP ACQUIRED.
ASSIGNED: OPR-R184-RA-87

0926
BSTRUCTION 1 0000000 58/51/36.00 160/57/00.00 R 81 11 0104 16315

HISTORY

- T9241(1948)--"NOT VISIBLE ON PHOTOGRAPHS" (COMPILATION SCALE 1:20,000)
UNKNOWN SOURCE--SUBM ROCK FIRST APPEARS ON CHART 16011 IN 1963 IN LAT 58-51.6N
LONG 160-57.0W.
- BP125151(1985)--AK. DEPT PUBLIC SAFETY; SUBM ROCK, PA (RLP 85) SCALED FROM
PROVISIONAL CHART 16315 IN LAT 58-52-02N, LONG 160-56-42W. HOR. AND VERT.
CONTROL DUBIOUS.
- NM18/85--SUBM ROCK; ADDED TO PROVISIONAL CHART 16315 IN LAT 58-51.6N, LONG
160-57.0W FROM CHART 16011. (ENTERED 6/85 RWD)

SURVEY REQUIREMENTS

FULL--VERIFY OR DISPROVE. DISPROVE BY A BOTTOM DRAG OR DIVER INVESTIGATION FOR
A .75 NM MINIMUM RADIUS. IF FOUND LD AND GP REQUIRED.
ASSIGNED: OPR-R184-RA-87

0927
BSTRUCTION 1 0000000 58/51/57.00 159/44/03.00 R 81 11 0104 16315

HISTORY

- T9054/47--"NOT VISIBLE ON PHOTOGRAPHS" (COMPILATION SCALE 1:20,000).
- BP125151(1985)--AK. DEPT PUBLIC SAFETY; SUBM ROCK, PA (RLP 85) SCALED FROM
PROVISIONAL CHART 16315 IN LAT 58-51-57N, LONG 159-44-03W. HOR. AND VERT.
CONTROL DUBIOUS. (ENTERED 6/85 RWD)
- TP01188/83--REVIEWED, CLASS III, NTH; NOT VISIBLE ON PHOTOGRAPHS. (UPDATED
7/86 RWD).

SURVEY REQUIREMENTS

FULL--VERIFY OR DISPROVE. DISPROVE BY A BOTTOM DRAG OR DIVER INVESTIGATION FOR
A .5NM MINIMUM RADIUS. IF FOUND LD AND GP REQUIRED.
ASSIGNED: OPR-R184-RA-87

0928 50928 ↓
UNKNOWN 1 0000000 58/52/00.00 160/03/00.00 R 82 11 0100 16315

HISTORY

- LN21/80(5/20/80)--17TH CGD; DANG SUBM WK, 56FT LONG BLUL LANDING CRAFT IS
REPORTED SUNK 1/2 MILE OFFSHORE IN APPROX POS LAT 58-52N, LONG 160-03W IN
NUNAVACHAK BAY. A MARKER HAS BEEN PLACED OVER THE WK. (ENTERED 6/85 RWD)
- TP01187/83--REVIEWED, CLASS III, NTH; NOT VISIBLE ON PHOTOGRAPHS. (UPDATED
-7/86 RWD)
- MAR-9/86; OPR-R186-PA-86; WRECK, PA NOT CONSIDERED DISPROVED AFTER 50M LINE
SPACING .5MILE RADIUS. SEA CONDITIONS PRECLUDED BOTTOM DRAG INVESTIGATION.
RETAIN WRECK.
- BP130989/86--ADV PRINT(H10220); CONFIRMS MAR ABOVE; INVESTIGATION NOT COMPLETE
(UPDATED 2/87 RWD)

DESCRIPTION

*** TELECOM WITH USCG; 17TH DIST. PETTY OFFICER DONNA HERWEYER (3/2/87) 907

586-7367), SHE INDICATED THAT NO ADDITIONAL INFORMATION WAS AVAILABLE AS TO A BETTER POSITION OR IF IT WAS SALVAGED. SHE REFERRED ME TO SEARCH AND RESCUE DIVISION (586-7340). ON 3/10/87 THEY INDICATED THAT THE LOG BOOKS AND CASE HISTORIES ARE ARCHIVED AT FEDERAL RECORDS CENTER, GSA, 6125 SAND POINT WAY, NE, SEATTLE, WASH.

SURVEY REQUIREMENTS

FULL--VERIFY OR DISPROVE. DISPROVE BY A BOTTOM DRAG OR SSS 200M (DEPTHS PERMITTING) INVESTIGATION .75M MIN. RADIUS. IF FOUND, LD AND GP REQUIRED. DISPROVAL MAY BE ACQUIRED BY SALVAGE DOCUMENTATION. CONSIDERING WEATHER CONDITIONS, THIS ITEM SHOULD BE SURVEYED ACCORDINGLY.
ASSIGNED: OPR-R184-RA-87

↑ 50928

0929
BSTRUCTION 1 0000000 58/53/00.00 160/15/35.00 R 53 11 0094 16315

HISTORY

BP18063(1916)--PACIFIC AM. FISH; SUBM ROCK, FOUR IN ROW DO SOUTH FROM POINT OF LAND. POSITION NOT SCALED; HOR. AND VERT. CONTROL DUBIOUS, HOWEVER IT IS IN FAIR AGREEMENT WITH THE CHARTED ROCK ON CHART 16011.
BP23186(1930)--AK. PACKERS ASSM. CHART (1924 ED); LEDGE, EXTENDS SOUTH FROM HWL APPROX. 1.5 MILES. HOR. AND VERT. CONTROL DUBIOUS.
T9237/47/48--"NOT VISIBLE ON PHOTOGRAPHS" (COMPILATION SCALE 1:20,000)
BP125151--AK. DEPT PUB. SAFETY. SUBM ROCK SCALED (APPROX 1:125,000) IN LAT 58-53-40N LONG 160-15-40W. CHARTED AS PA (REP 1985). HOR. AND VERT. CONTROL DUBIOUS.
CL381/85--ROCK AWASH; LETTER REDESCRIBES ROCK AS AWASH.
NM23/85--ROCK AWASH; PUBLISHED FROM LETTER ABOVE. NOTICE PROVIDES POSITION AS LAT 58-53-06N, LONG 160-15-35W, HOWEVER CHART 16315 SHOWS THE ROCK IN LAT 58-53-00N, LONG 160-15-35W; (1:100,000). (ENTERED 6/85 RWD)
TP01186/83--REVIEWED, CLASS III, NTH; NOT VISIBLE ON PHOTOGRAPHS. (UPDATED 7/86 RWD)

SURVEY REQUIREMENTS

FULL--VERIFY OR DISPROVE. DISPROVE BY VISUAL SEARCH AT CHART DATUM. IF NOT VISIBLE A BOTTOM DRAG/DIVER INVESTIGATION WITH A MINIMUM RADIUS OF .5NM IS REQUIRED. LD AND GP REQUIRED IF FOUND.
ASSIGNED: OPR-R184-RA-87

0930
BSTRUCTION 1 0000000 58/54/19.00 159/43/35.00 R 31 *1 0094 163

HISTORY

T9044/46--ROCK AWASH; SCALED AT 1:20,000 IN LAT 58-54-19N, LONG 159-43-35W. (ENTERED 6/85 RWD)
TP01188/83--REVIEWED, CLASS III, NTH; NOT VISIBLE ON PHOTOGRAPHS. (UPDATED 7/86 RWD).

SURVEY REQUIREMENTS

FULL--VERIFY OR DISPROVE. DISPROVE BY A BOTTOM DRAG OR DIVER INVESTIGATION AT 200M MINIMUM RADIUS. IF FOUND LD AND GP REQUIRED.
ASSIGNED: OPR-R184-RA-87

0931

Kodiak Marine Survey
Box 365
Kodiak, Ak 99613
Phone: (907) 486-3616



REPORT OF ACCIDENT
(Master's Statement)

Date May 17, 1980

VESSEL Shooting Star

Date of Accident May 12, 1980 Time 0450

Place of Accident Nunavachak Bay, Bristol Bay, Alaska

Cause of Accident Heavy weather

If Collision, Give Name of Other Vessel _____

Has Owner of Other Vessel been Notified _____

Details of Accident in Full The vessel Shooting Star was moored alongside the barge Bay Star at Nunavachak Bay in Bristol Bay, Alaska during the herring fishing season. At about 0400 on May 12, 1980, severe weather conditions prevailed with SE gusts up to 60-70 knots. With the seas up to 6-7 feet in the bay. The port side cleats to which the tie-up lines were attached pulled out and shortly thereafter the Shooting Star rolled over and sank. The Shooting Star was moored next to the Bay Star temporarily as several trampers and other boats had taken up all available mooring space alongside the Arctic and Bering Star barges.

(See reverse side)

Extent of Damage _____

Date Bottom was Last Cleaned and Painted _____

Remarks _____

Name of Insurance Broker _____

Dale Stansbury
SIGNATURE OF MASTER OR OWNER

REPORT OF VESSEL CASUALTY OR ACCIDENT

INSTRUCTIONS

1. An original and two copies of this form shall be submitted, without delay, to the Officer in Charge, Marine Inspection, in whose district the casualty occurred, or in whose district the vessel first arrived after such casualty.
2. If the person making the report is a licensed officer on a vessel required to be manned by such officer, he must make the report in writing and in person to the proper Marine Inspector. If because of distance it may be inconvenient for such an officer to submit the report in person, he may submit the required number of copies by mail. However, to avoid delay in investigations, it is desired that reports be submitted in person.

3. This form should be completed in full. Questions not applicable to a particular case should be indicated as such. Where answers are unknown or none, they should be indicated as such. All copies should be signed.
- NOTE: (1) Report all deaths and injuries (including amputations in excess of 72 hours, on CO-2000 vessels) whether or not there was a vessel casualty.
- (2) Attach separate Form CG-924E to this report for each person killed or injured (including amputations in excess of 72 hours on a vessel) whether or not a vessel casualty reported herein.

RECEIVED
U.S. COAST GUARD
OFFICE
ANCHORAGE, ALASKA

101 Officer in Charge, Marine Inspection, Port of Anchorage, Alaska DATE RECEIVED
June 11, 1980

I PARTICULARS OF VESSEL

1. NAME OF VESSEL Shooting Star	2. OFFICIAL NUMBER LCM CF-2689 00	3. HOME PORT Dillingham	4. NATIONALITY USA
5. TYPE OF VESSEL (Pat., pass., etc.) Ex-Navy Landing Craft	6. PROPULSION (Steam, diesel, etc.) diesel	7. GROSS TONNAGE 50	8. REGISTERED LENGTH OR L. S. A. 56 ft.
9. HULL MATERIALS steel	10. YEAR BUILT NA	11. RADIO EQUIPMENT <input checked="" type="checkbox"/> TRANSMIT <input checked="" type="checkbox"/> RECEIVE <input checked="" type="checkbox"/> VOICE <input type="checkbox"/> CW (Key)	
12. (a) RADAR EQUIPPED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		(b) IF YES, RADAR OPERATING AT TIME OF CASUALTY <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
13. (a) CERTIFICATE OF INSPECTION ISSUED AT PORT OF San Francisco <i>None</i>		(b) DATE CERTIFICATE OF INSPECTION ISSUED <i>8/16/79 N/A</i>	
14. (a) NAME OF MASTER OR PERSON IN CHARGE (Indicate which) Dale Schwarzmiller (person in charge)		(b) DATE OF BIRTH 10/27/53	(c) LICENSED BY COAST GUARD <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
15. (a) NAME OF PILOT (If on board at time of accident) none		(b) PILOT SERVING UNDER AUTHORITY OF LICENSE ISSUED BY <input type="checkbox"/> USCG <i>N/A</i> <input type="checkbox"/> STATE <input type="checkbox"/> FOREIGN	
16. (a) NAME OF OWNER(S), OPERATOR(S) OR AGENT (Indicate which) Icicle Seafoods, Inc., owner/operator		(b) ADDRESS OF OWNER(S), OPERATOR(S), OR AGENT 4241 21st Ave. West Seattle, Washington 98199	

II PARTICULARS OF CASUALTY

17. (a) DATE OF CASUALTY 5/12/80	(b) TIME OF CASUALTY (Local or zone) 0450	(c) ZONE DESCRIPTION Nunavachak Bay	(d) TIME OF DAY <input checked="" type="checkbox"/> DAY <input type="checkbox"/> NIGHT <input type="checkbox"/> TWILIGHT
18. LOCATION OF CASUALTY (Latitude and longitude, distance and TRUE bearing from charted object; dock; anchorage; etc.)			
19. BODY OF WATER (Geographical name) Nunavachak Bay Bristol Bay, Alaska	20. RULES OF THE ROAD APPLICABLE <input type="checkbox"/> INLAND <input type="checkbox"/> GREAT LAKES <input type="checkbox"/> WESTERN RIVERS <input checked="" type="checkbox"/> INTERNATIONAL <input type="checkbox"/> OTHER (Specify)		
21. (a) DID CASUALTY OCCUR WHILE UNDERWAY? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (b) IF YES, LAST PORT OF DEPARTURE <i>N/A</i> (c) IF YES, WHERE BOUND WHEN CASUALTY OCCURRED <i>N/A</i>			
22. (a) WEATHER CONDITIONS WHEN CASUALTY OCCURRED: <input type="checkbox"/> CLEAR <input type="checkbox"/> PARTLY CLOUDY <input type="checkbox"/> OVERCAST <input type="checkbox"/> FOG <input type="checkbox"/> RAIN <input type="checkbox"/> SNOW <input checked="" type="checkbox"/> SE winds 60 to 70 knots OTHER (Specify)			
(b) VISIBILITY (Miles, yds., ft., etc.) 5 miles	(c) WIND DIRECTION SE	(d) FORCE IN KNOTS 60 to 70	(e) SURF <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
(f) AIR TEMPERATURE 33	23. (a) SEA CONDITIONS WHEN CASUALTY OCCURRED rough		
(b) SEA WATER TEMP (If available) NA	(c) HEIGHT OF SEA 10 ft.	(d) DIRECTION OF SEA SE	(e) HEIGHT OF SWELL 10 ft.
(f) DIRECTION OF SWELL SE	24. (a) NATURE OF CARGO (Specify) Misc. fishing gear		
(b) AMOUNT OF DRY CARGO (Long tons) <i>unk</i>	(c) AMOUNT OF BULK LIQUID (Long tons) <i>unk</i>	(d) AMOUNT OF DECK LOAD (Long tons) <i>unk</i>	
25. (a) DRAFT FORWARD 3' - 02"		(b) DRAFT AFT 4' - 02"	
26. (a) TYPES OF LIFESAVING EQUIPMENT USED, IF ANY none		(b) NO. LIVES SAVED WITH LIFE-SAVING EQUIPMENT none	(c) LIFESAVING EQUIPMENT SATISFACTORY <input type="checkbox"/> YES <input type="checkbox"/> NO (If no, explain in item 24)

INV

27 CREW PASSENGERS* OTHER (Specify)	28 ESTIMATED LOSS/DAMAGE TO YOUR VESSEL	\$ 60,000
NUMBER ON BOARD	ESTIMATED LOSS/DAMAGE TO YOUR CARGO	\$ 1,000
DEAD/MISSING	ESTIMATED LOSS/DAMAGE TO OTHER PROPERTY	\$ 1,000
INCAPACITATED (over 3 days)	(Specify whether vessel, deck, bridge, etc.)	

29 NATURE OF THE CASUALTY (Check one or more of the following. Give pertinent details in item 30.)

COLLISION WITH OTHER VESSEL(S) (Specify)	EXPLOSION/FIRE (Other)
	GROUNDING
	<input checked="" type="checkbox"/> FOUNDERS (Sinking)
COLLISION WITH FLOATING OR SUBMERGED OBJECTS	CAPSIZING WITHOUT SINKING
COLLISION WITH FIXED OBJECTS (Piers, bridges, etc.)	FLOODING, SCRAPING, ETC. WITHOUT SINKING
COLLISION WITH ICE	WAVY WEATHER DAMAGE
COLLISION WITH AIDS TO NAVIGATION	CARGO DAMAGE (No vessel damage)
COLLISION (Other)	MATERIAL FAILURE (Vessel structure)
EXPLOSION/FIRE (Involving cargo)	MATERIAL FAILURE (Engineering machinery, including main propulsion, auxiliary, boilers, evaporators, deck machinery, electrical, etc.)
EXPLOSION/FIRE (Involving vessel's fuel)	
FIRE (Vessel's structure or equipment)	EQUIPMENT FAILURE
EXPLOSION (Boiler and associated parts)	CASUALTY NOT NAMED ABOVE
EXPLOSION (Pressure vessels and compressed gas cylinders)	

30 DESCRIPTION OF CASUALTY (Event and circumstances leading to casualty and present when it occurred. Attach diagram and additional charts, if necessary)

see attached report of accident

31 DAMAGE (Give below general description and state if vessel is a total loss.)

Total loss

III ASSISTANCE AND RECOMMENDATIONS

32. AUTO ALARM TRANSMITTED BY YOUR VESSEL: YES NO

33(a) ASSISTANCE RENDERED BY STATIONS AND VESSELS (Include Coast Guard and other stations and vessels)	(b) OTHER ASSISTANCE RENDERED
N/A	N/A

34. RECOMMENDATIONS FOR CORRECTIVE SAFETY MEASURES PERTINENT TO THIS CASUALTY (Include explanation of unsatisfactory lifesaving equipment)

None

Signature: *Richard C. Kelly*
 Title: Vice President, Iccie Seafoods, Inc. owner
 Phone: (206) 292-0985



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

05606

Officer-in-Charge
Marine Inspection
Western Alaska
701 C St., Box 17
Anchorage, AK. 99513
907-271-5137

16732/C-44-80
15 July 1980

From: Investigating Officer
To: Commandant (G-MMI-1)
Via: (1) Officer-in-Charge Marine Inspection Western Alaska
(2) Commander, Seventeenth Coast Guard District (m)

Subj: Uninspected M/V SHOOTING STAR, undocumented; sinking in Nunavachak Bay, Bristol Bay, AK on 12 May 1980 with no personnel injuries

1. Investigation of subject casualty is completed; a narrative report will not be submitted.
2. The proximate cause of the casualty was lack of attention by the operator on the effect of heavy weather conditions on his vessel when tied up alongside the barge BAYSTAR. Shifting the SHOOTING STAR to another moorage or riding out the weather might have prevented the sinking.
3. There is evidence of violation of 46 USC 319 on the part of the owner/operator of the M/V SHOOTING STAR in that the vessel should have been but was not documented.
4. The operator's comments for corrective safety measures are none.
5. With the exception of the above, there is no evidence of actionable misconduct, inattention to duty, negligence, or willful violation of law or regulation on the part of licensed or certificated personnel; nor that any personnel of the Coast Guard, or any other government agency, or any other person contributed to the casualty. Therefore, it is recommended that this casualty investigation be closed.

[Handwritten Signature]
U.S. MARINE

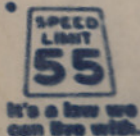
Encl: (1) Form CG-2692

15 July 1980

FIRST ENDORSEMENT

From: Officer-in-Charge Marine Inspection Western Alaska
To: Commandant (G-MMI-1)
Via: Commander, Seventeenth Coast Guard District (m)

1. Forwarded approved.
2. Violation case number V-22-80 has been opened at MSD Anchorage.



[Handwritten Signature]
T.B. McCARTY
By direction



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

NOAA Ship RAINIER
1801 Fairview Ave. East
Seattle, WA 98102-3767

March 30, 1987

Commandant, USCG (G-MMI-3)
2100 2nd St. SW
Washington, DC 20593
ATT: Lieutenant Commander Moniz

Dear Lieutenant Commander Moniz,

The NOAA Ship RAINIER will be conducting hydrographic surveys in northern Bristol Bay, Alaska, between May 27 and September 4 of this year. The surveys are in support of the production of two new 1:40,000 nautical charts of the area. In order to eliminate the need for a costly wire-sweep investigation, I am attempting to document the status of a wreck currently plotted on the preliminary chart as "position approximate." The USCG Marine Safety Office in Anchorage, Alaska, referred me to your office.

The source of the plotted wreck is the Seventeenth Coast Guard District Local Notice to Mariners of May 20, 1980:

"Dang subm wk, 56 ft long blue landing craft is reported sunk 1/2 mile offshore in approx pos lat 58-52N, long 160-03W in Nunavachak Bay. A marker has been placed over the wk."

Nunavachak Bay is a small indentation on the northern coast of Bristol Bay, east of Togiak Bay, Alaska. The nearest community is Togiak and the nearest harbor is Dillingham. During survey work in 1986, no visual evidence of the wreck or marker was found.

Mr. Tom Pettin, of your office, indicated in a telephone conversation that the above information should be enough to perform a search of your data base in an effort to trace whatever casualty report may exist for the vessel. Any information you can provide as soon as possible by telephone, such as the vessel's name, ownership, or registration number, would be greatly appreciated, as would a copy of the casualty report when available.



Until the RAINIER sails April 7, I can be reached at FTS 399-4794. After that date Mr. Dennis Hill should be contacted at FTS 392-6853. Correspondence should be addressed to Commanding Officer, NOAA Ship RAINIER, 1801 Fairview Ave. East, Seattle, WA, 98102-3767.

Thank you very much for your assistance.

Sincerely,

Carl W. Fisher
Carl W. Fisher
Captain, NOAA
Commanding Officer

U.S. Department
of Transportation
**United States
Coast Guard**



Commandant
United States Coast Guard

Washington, D.C. 20593-0001
Staff Symbol:
Phone: **G-MMI-3**
(202) 267-1426

16732

APR 14 1987

Capt. Carl W. Fisher
National Oceanic and Atmospheric Admn.
Commanding Officer, NOAA Ship RAINIER
1801 Fairview Avenue East
Seattle, Washington 98102-3767

Dear Capt. Fisher:

In response to your letter dated March 30, 1987, a search of the casualty data base was conducted for sinkings from March to May, 1987, in and around Nunavachak Bay, Alaska. Of the three sinkings detected, the sinking of the SHOOTING STAR fits your request.

The SHOOTING STAR was an ex-Navy landing craft that sunk in Bristol Bay on May 12, 1980. Enclosed is a copy of the SHOOTING STAR casualty case file.

I hope that this information will be of assistance to you.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Moniz, III".

T. MONIZ, III
Lieutenant Commander, U.S. Coast Guard
Chief, Marine Safety Evaluation Branch
Marine Investigation Division
By direction of the Commandant

Enclosure



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

NOAA Ship RAINIER
Pacific Marine Center
1801 Fairview Ave. E.
Seattle, WA 98102

Captain Phillip Gilson
Department of Public Safety
Fish and Wildlife Protection
5700 East Tudor Road
Anchorage, AK 99507

Dear Captain Gilson:

We recently contacted the Department of Public Safety to verify the position of a sunken ex-Navy landing craft located in Nunavachak Bay. LT Swanson of the Kodiak office referred us to you, saying you could specify the location of the M/V SHOOTING STAR at the time of its sinking; 0450 on May 12, 1980. The logbook of the VIGILANT indicates that the landing craft went down in 15 feet of water after striking a barge, the BAY STAR, to which it was tied during the storm. The BAY STAR ran aground and was later salvaged. Enclosed are reproductions of the small-scale charts of this area, as well as two preliminary copies of our survey of Nunavachak Bay. Please mark the exact location of the wreck on one copy of the survey sheet and return it with a brief written explanation about the wreck and its location. A self-addressed envelope is enclosed for your convenience.

A new edition of chart 16315, including Nunavachak Bay, will be published in spring of 1988, providing mariners with the latest survey information available. Accurate placement of the wreck symbol on this chart is a high priority of the National Ocean Service. Your cooperation is greatly appreciated.

Sincerely,

John C. Albright
Captain, NOAA
Commanding Officer



APPROVAL SHEET

Descriptive Report to Accompany

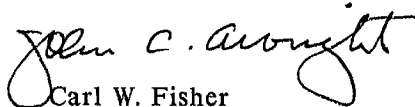
Field Examination

RA-5-2-87

FE-303

Standard procedures were followed in accordance with the Hydrographic Manual, Third Edition; Hydrographic Survey Guidelines; and PMC OORDER in producing this survey. The data were examined daily during acquisition and processing phases of the survey.

The expansion sheets and accompanying records have been examined by me, are considered complete and adequate for charting purposes, and are approved.


for **Carl W. Fisher**
Captain, NOAA
Commanding Officer

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: November 27, 1987

MARINE CENTER: Pacific

OPR: R184

HYDROGRAPHIC SHEET: ~~FE-303~~ (H-102~~20~~⁶³)

LOCALITY: Nunavachak Bay, Bristol Bay, Alaska

TIME PERIOD: June 21 - July 11, 1987

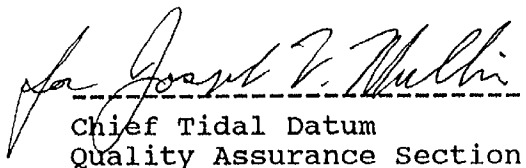
TIDE STATION(S) USED: 946-5283 Summit Island, N.E. Side, AK

PLANE OF REFERENCE (MEAN LOWER LOW WATER): 10.34 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 10.0 ft.

REMARKS: RECOMMENDED ZONING

1. Zone Direct



Chief Tidal Datum
Quality Assurance Section

GEOGRAPHIC NAMES

H-10263

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
ALASKA, BRISTOL BAY CENTRAL PORTION OF NUNAVACHAK BAY	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP ATLAS	RAND McNALLY	U.S. LIGHT LIST			
ALASKA (TITLE)											1
BRISTOL BAY (TITLE)											2
NUNAVACHAK BAY	X	X									3
											4
											5
											6
											7
											8
											9
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											24
											25

Approved:

Charles E. Harrington
Chief Geographer - N/C62x5

APR 29 1988



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102-3767

SEP 30 1987

N/MOP21x2/MM

TO: Commanding Officer
NOAA Ship RAINIER

Robert L. Sandquist

FROM: N/MOP - Robert L. Sandquist

SUBJECT: Preprocessing Examination of FE-303, Alaska,
Togiak Bay, Nunavachak Bay to Right Hand Point

Survey FE-303 has been partially reviewed in accordance with Hydrographic Survey Guideline No. 15. Survey FE-303 is an investigation of AWOIS #50928 which required use of side scan sonar.

A cursory examination of the sonargrams did not reveal an indication of the AWOIS item. However, several sonar contacts appeared on the sonargrams. The hydrographer has not addressed these contacts and, given the shallow depths in the area, it is possible that dangers to navigation may exist. The coverage of the side scan sonar investigation cannot be determined as the track plot is incomplete.

Specifically, the side scan sonar data was not submitted in accordance with Part Three (Field Records and Processing) of the Provisional Side Scan Sonar Manual. It cannot be determined if the hydrographer complied with Part Two (Field Operations) as there is no supporting documentation. It cannot be determined if adequate bottom coverage was achieved from the track plot forwarded with the survey. Also, there is no evidence of any sonar contact examination as the hydrographer has neither discussed the side scan sonar operation in the Descriptive Report nor forwarded a sonar contact log and preliminary sonar contact overlay.

Survey FE-303 is not acceptable for marine center processing until additional data processing, analysis of all side scan sonar data, and additional documentation are submitted in accordance with Part Three of the Provisional Side Scan Sonar Manual.

Attachment

cc: N/MOP2x1
✓N/MOP21x2
N/MOP211
N/CG2

ATTACHMENT B





UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

Pacific Marine Center
Nautical Chart Branch
7600 Sand Point Way NE
Seattle, Washington 98115-0070

September 30, 1987 N/MOP21x2/MM

TO: N/MOP - Robert L. Sandquist

FROM: *Thomas W. Richards*
N/MOP 21 - Thomas W. Richards

SUBJECT: Preprocessing Examination for FE-303

I. SURVEY INFORMATION

A. Field No. RA-5-2-87 Registry No. FE-303

B. State: Alaska

General Locality: Togiak Bay

Sublocality: Nunavachak Bay to Right Hand Point

C. Project Instructions: OPR-R184-RA-87

Original dated: March 6, 1987

Change No. 1 dated: March 20, 1987

Change No. 2 dated: June 2, 1987

D. Dates:

Field Work Commenced: June 21, 1987

Field Work Completed: July 11, 1987

plus 6 weeks: August 24, 1987

Data received at Marine Center: August 25, 1987

plus 1 month: September 25, 1987

Examination critique transmitted to field SEP 30 1987

Target for completion of Marine Center processing _____



II. PREPROCESSING EXAMINATION CRITIQUE

Hydrographic survey FE-303 was performed by personnel of NOAA Ship RAINIER, Captain Carl W. Fisher, Commanding Officer. The following personnel supervised portions of the data acquisition: Lieutenant Commander Schomaker, Ensign O'Mara and Ensign Meis.

In accordance with the Preprocessing Examination System set forth in Hydrographic Survey Guideline (HSG) No. 15, Section III, the following items are brought to your attention:

A. Danger to Navigation Report:

RAINIER reported no dangers to navigation within the limits of FE-303.

Several possible dangers to navigation were identified during the preprocessing examination but have not been fully investigated as analysis of sonar contacts was not conducted by the hydrographer and no examination records exist.

B. Compliance with Instructions:

Survey FE-303 generally complies with all sections of the Project Instructions. However, it does not comply with Section 7.11 of the Project Instructions which states that side scan sonar operations are to be conducted in accordance with the Provisional Side Scan Sonar Manual, dated April 25, 1986.

There is no evidence of any examination of the contacts depicted on the sonargrams. The field records required in Section 3.1 of the Provisional Manual were not forwarded. A track plot was forwarded with the data but there is no certification by the Chief of Party that towfish height remained between 8 and 20 percent of the range scale in use [Provisional Side Scan Sonar Manual Section 3.1.3].

N. Survey Acceptance:

The preprocessing examination for FE-303 was not completed due to the incomplete field processing of the survey data received by Nautical Chart Branch.

Survey FE-303 is not in compliance with the requirements set in the Provisional Side Scan Sonar Manual or Section 7.11 of the Project Instructions. Therefore, I recommend that FE-303 be returned to RAINIER for additional data processing and submission of the following items in accordance with Part Three of the Provisional Side Scan Sonar Manual:

1. Thorough description in the Descriptive Report of the field procedures used in side scan sonar operations.

2. Examination of sonargrams to determine those contacts which are significant (include at least all those contacts rising 10% or more off the bottom). Target heights can be estimated using the target shadow length method.

3. Compilation of Sonar Contact Log:

- a. sonar contact list
- b. sonar contact examination record

4. Plot of Sonar Contact Overlay

5. Sonar Coverage Plot or Abstract

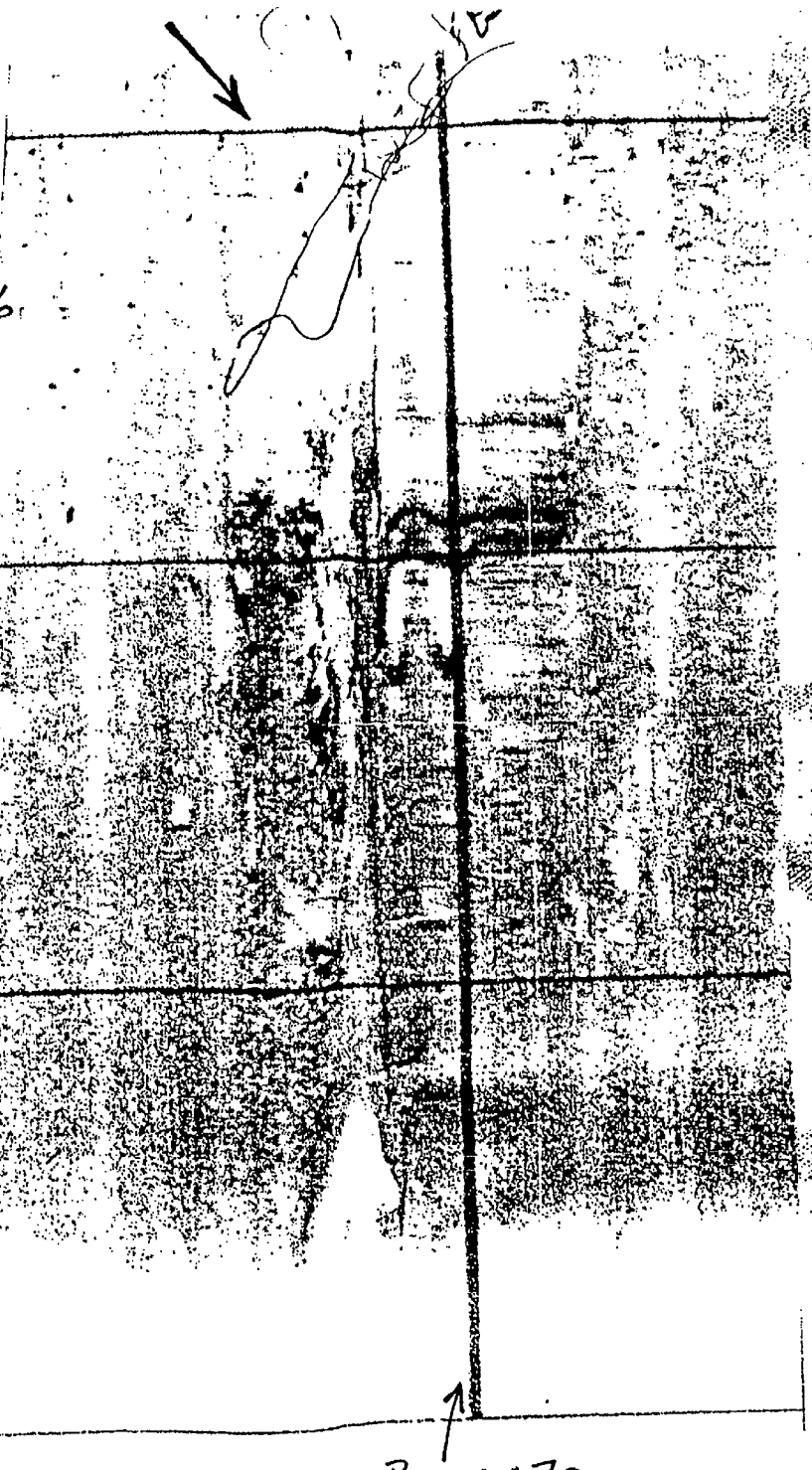
6. Report of results and recommendations based on findings of the side scan sonar search.

Prepared by:

Marlene Mozgala
Marlene Mozgala

50 METER RANGE
SCALE

PORT SIDE
DAY 177 Pos. 3459-3626



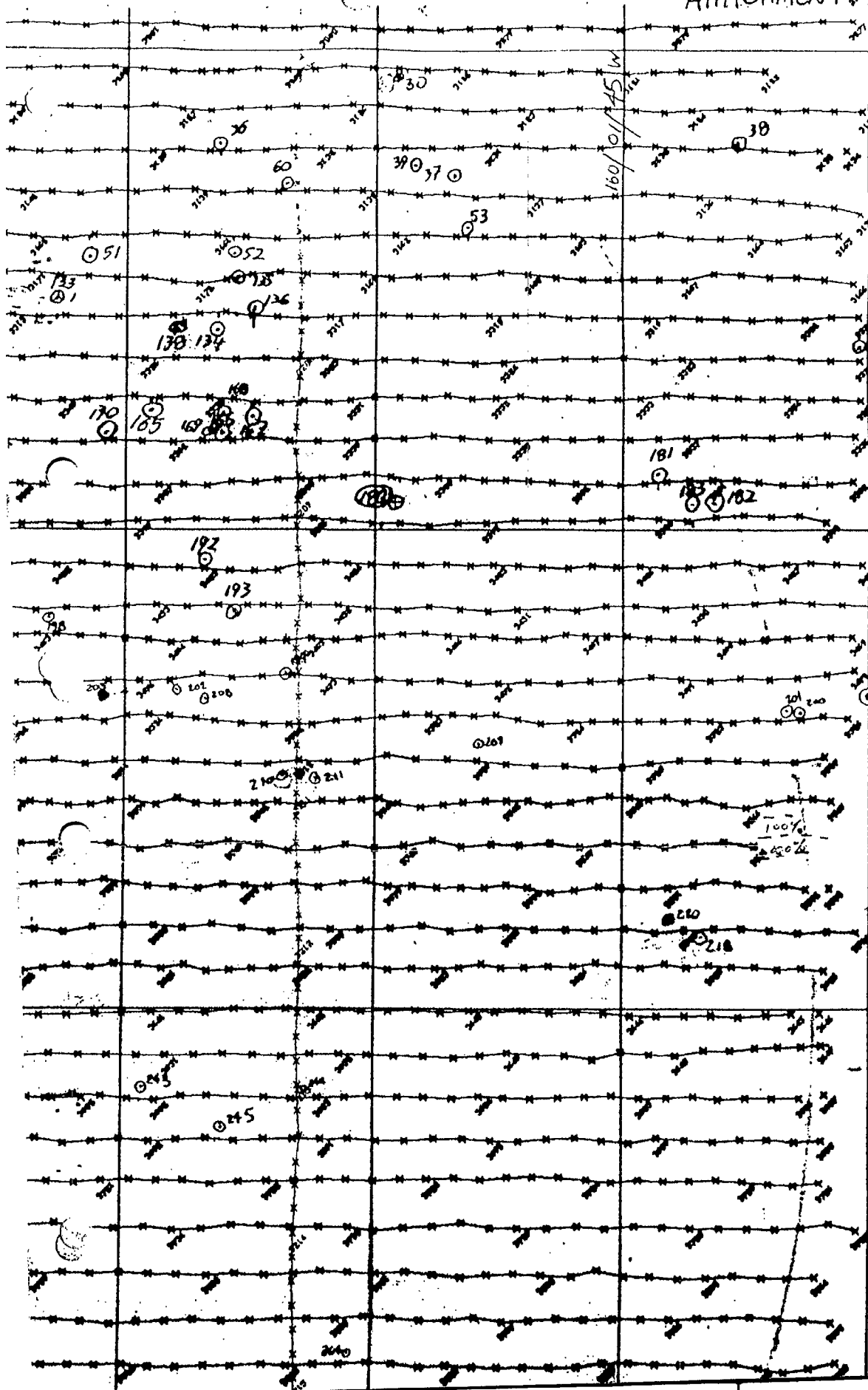
LINE RESUMES POS. 3470

TIME: 1924-35

ATTACHMENT C

ATTACHMENT D

N
U
N
A
V
A
C
H
A
K



137

58/52/15 N

199A

58/52/00N

160/01/30 W

CONTACT
APPROX
15M lower
(c. 10' c.
bedrock)



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

National Ocean Service
Pacific Marine Center
Nautical Chart Branch
7600 Sand Point Way NE
Seattle, Washington 98115-0070

RS
March 3, 1988

N/MOP21x2/JM

TO: N/MOP - Robert L. Sandquist

FROM: *Thomas W. Richards*
N/MOP21 - Thomas W. Richards

SUBJECT: Preprocessing Examination for H-10263

I. SURVEY INFORMATION

A. Field No.: RA-5-2-87 Registry No. H-10263
(re-numbered from FE-303)

B. State: Alaska

General Locality: Bristol Bay

Sublocality: Nunavachak Bay to
Right Hand Point

C. Project Instructions: OPR-R184-RA

Original dated: March 6, 1987

Change No. 1 dated: March 2nd, 1987
No. 2 dated: June 2, 1987
No. 3 dated: August 10, 1987

D. Dates:

Field Work Commenced: June 21, 1987
Field Work Completed: July 11, 1987

plus 6 weeks: August 24, 1987

Data received at Marine Center: August 25, 1987

Returned for additional
field processing: September 30, 1987

Data received at Marine Center: February 5, 1988

plus 2 months: April 5, 1988

Examination critique transmitted to field March 8, 1988

Target for completion of Marine Center processing September 8, 1988

H-10263





U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102-3767

MAR 8 1988

N/MOP21x2/JM

TO: Commanding Officer
NOAA Ship RAINIER

FROM: N/MOP - Robert L. Sandquist

SUBJECT: Preprocessing Examination of H-10263, Alaska,
Bristol Bay, Nunavachak Bay to Right Hand Point

Hydrographic survey H-10263 (re-numbered from FE-303) has been reviewed in accordance with Hydrographic Survey Guideline No. 15, and the Preprocessing Examination Critique for this survey is attached. The failure to further investigate a representative sample of the side scan sonar contacts on this survey is not in accordance with the Provisional Side Scan Sonar Manual, Part 2 (Examination Phase). This is considered to be a major deficiency. Further field work on a representative sample of the side scan sonar contacts is recommended. Survey H-10263 is accepted for Pacific Marine Center processing.

The Preprocessing Examination Critique is designed to provide information which will be useful to the Command for maintaining the quality of future hydrographic surveys. I encourage you to use this information constructively. Your comments on specific critique items are welcome.

Attachments

cc: N/MOP2x1
N/MOP21x2
N/MOP211
N/CG2



II. PREPROCESSING EXAMINATION CRITIQUE

Hydrographic survey H-10263 was performed by personnel of the NOAA Ship RAINIER. This survey was originally registered as Field Examination 303 (FE-303). Captain Carl W. Fisher was the Commanding Officer. The following personnel supervised portions of the data acquisition: Lieutenant Commander Schomaker, Ensigns O'Mara, Meis.

In accordance with the Preprocessing Examination System set forth in Hydrographic Survey Guideline (HSG) No. 15, Section III, the following items are brought to your attention:

A. Danger to Navigation Report:

No dangers were reported by RAINIER personnel for this survey. During the preprocessing examination a Dangers to Navigation Report regarding the numerous contacts found on the sonargrams was submitted to the U. S. Coast Guard (see attachment A).

B. Compliance with Instructions:

Survey H-10263 is an investigation of AWOIS item number 50928, a wreck. Survey requirements were to verify or disprove the wreck by a bottom drag or 200% coverage side scan sonar search of an area 0.75 nautical miles radius around the reported location. RAINIER chose to conduct a side scan sonar search. The Project Instructions require that the search be conducted in accordance with the Provisional Side Scan Sonar Manual, dated April 25, 1986 (Project Instructions, sec. 7.11.).

Survey H-10263 was submitted to N/MOP21 for processing on August 25, 1987. It was returned for additional field processing on September 30, 1987 (see attachment B). The survey was re-submitted to N/MOP21 on February 5, 1988. RAINIER personnel, in performing the additional field processing, made an excellent effort in logging and calculating the heights and locations of the numerous side scan contacts.

200% coverage was not achieved within the 0.75 nm radius of the reported location of the wreck. The hydrographer calculated that coverage ranged from 126% to 200% throughout the area, with one small holiday (no coverage) of 30x20 meters. During the preprocessing exam a check of the calculations confirmed that in many locations coverage was less than 200%. An additional holiday was found, consisting of an area 20x100 meters, centered at latitude 58/51/31N, longitude 160/01/57W.

A total of 577 contacts were found on the sonargrams that rise up from the bottom more than 10% of the surrounding depth. The plotted positions of the contacts on the field sheet are in error by approximately 5 meters (1 mm at the scale of the field sheet). The hydrographer did not incorporate the distance from the Mini-Ranger antenna to the stern of the launch when calculating the towfish layback. On the Side Scan Contact list submitted with the survey data a correction of +5 meters should be made to all data in the fish layback column (PSSSM, sec. 3.1.1.1., pp 19, 20).

RAINIER personnel did not dive or conduct further investigations in the field on any of the 577 uncharted contacts found on the sonargrams. This is considered to be a major deficiency. These objects appear to be boulders or rocks, with widths of 1 to 4 meters, rising above the bottom 1 to 2.1 meters. The hydrographer states that no evidence of the wreck was found. While no obvious man-made objects are found on the sonargrams, it is possible that some of the 577 contacts are remains of the wreck. Further investigations of the contacts (dives, leadline or closely-spaced echo sounding line investigations), resulting in accurate positions and least depths, should have been made in the field, at least on the fifteen most significant contacts listed in the Descriptive Report, ~~Appendix XIII~~ (PSSSM, secs. 2.7., 2.7.2., pg. 17).

Side Scan Contact Summary

C. Final Field Sheets:

The final field sheet for Survey H-10263 is a 1:5000 expansion plot of the side scan coverage. A 1:5000 semi-smooth plot of the soundings gathered during the side scan search was also submitted. Both sheets are neat and legible.

D. Descriptive Report:

In Section Q., Recommendations, the hydrographer recommends removing the "Wreck PA" symbol and placing a note on the chart stating that "...a wreck is reported approximately 0.5 nautical mile offshore in Nunavachak Bay". The "Wreck PA" symbol serves the same purpose as the hydrographer's recommended statement.

E. Echograms:

Annotations and scanning of the echograms were adequate.

F. Sounding Volumes and/or Raw Data Printouts:

No major problems were found within the raw data printouts.

G. Sounding Correctors:

A brief examination of the corrections to soundings found no problems. Records and computations were thorough and complete.

K. Side Scan Sonar:

All sonargrams were checked during the preprocessing exam. Annotations, range settings, and quality of the printing were adequate. The sonar coverage abstract was checked for accuracy, with no problems found in the calculations. The side scan contact list was randomly checked for errors. The only errors found were in the fish layback column, discussed in Sec. B. of this examination.

During the preprocessing exam one additional contact was found. This contact was found at the beginning of a line (position 3470). The contact is rectangular in shape, and approximately 15 meters long. The contact has a

poor shadow. The contact could be insignificant. (it may be a minor bedrock feature, distorted due to the launch still turning to get on line). However, because the shape and length characteristics are similar in shape to the wreck description, it should be considered for further investigation. The contact was plotted as #199A on the field sheet, at latitude 58/52/10N, longitude 160/01/30W (see attachments C, D).

L. Automated Data Check:

No significant problems occurred during the spooling of the survey.

N. Survey Acceptance:

The preprocessing examination for H-10263 was conducted under the time constraints of HSG 15. All comments contained herein are based on a spot check of the data, and it is possible that some problem areas have not been addressed.

I recommend that H-10263 be accepted for Nautical Chart Branch processing. Attached to this report is a list of contacts recommended for further investigation, as time and resources allow. These contacts are the 17 most significant ones, taken from Appendix XIII of the Descriptive Report, plus 4 additional contacts that are considered representative of the area (see attachments E, F).

The existence of the wreck was not disproven. I further recommend that additional office research, resulting in a better position for the wreck, be conducted. Additional office research should include a further review of the original charting records. Interviews with persons having local knowledge of the existence of the wreck is also recommended. If evidence of the wreck is not found during further investigation of the contacts listed above, then the side scan sonar search should be expanded to areas determined by the additional office research.

Additional field work on this wreck should be assigned a priority lower than the surveys presently scheduled for completion in 1988.

Prepared by:

John A. Miller

John A. Miller

SIDESCAN CONTACT SUMMARY

 PROJECT NO. OPR-R184-RA-87

 AWOIS NO. 50928

 SURVEY NO. FE-303

 EXPANSION NO. N/A

 SHEET NO. RA-5-2-87

ALL HEIGHTS & DEPTHS IN METERS

✓ ALL CONTACTS >15m IN APPARENT HEIGHT

CONTACT NUMBER	CONTACT HEIGHT	WATER DEPTH	FIX NUMBERS	GP-POSITION LAT, LONG	REMARKS
66	1.6 m	^{9.3m} 5.1 fm	3242.0	58/51/31.5N 160/04/10.0W	✓
104	1.6 m	^{5.1m} 2.8 fm	3297.9	58/52/44.5 N 160/02/14.5 W	✓
179	1.5 m	^{6.6m} 3.6 fm	3383.3	58/52/15.6N 160/02/43.0W	Object is 4m wide
203	1.8 m	^{7.3m} 4.0 fm	3474.2	58/52/10.0N 160/02/16.5 W	✓
220	1.8 m	^{7.1m} 3.9 fm	3585.1	58/52/103.0N 160/01/42.9W	✓
247	1.6 m	^{8.4m} 4.6 fm	3701.4	58/51/56.8N 160/03/46.0W	✓
272	1.5 m	^{7.9m} 4.3 fm	2017.2	58/51/34.8N 160/01/55.7 W	✓
349	1.6 m	^{6.6m} 3.6 fm	2112.7	58/52/28.0N 160/03/46.3 W	Same as #346
380	1.5 m	^{6.6m} 3.6 fm	2143.1	58/52/28.0 N 160/03/55.5 W	Same as #385 and #559
385	1.5 m	^{6.6m} 3.6 fm	2155.6	58/52/27.5 N 160/03/56.6 W	Same as #380 and #559
510	1.8 m	^{4.8m} 2.6 fm	2312.0	58/52/30.2 N 160/04/31.2 W	✓
513	2.1 m	^{4.8m} 2.6 fm	2316.9	58/52/41.5 N 160/04/07.5 W	Same as #463
535	1.5 m	^{3.8m} 2.1 fm	2330.8	58/52/46.6 N 160/04/10.5 W	Outside position plot parameters
542	1.5 m	^{4.2m} 2.3 fm	2334.0	58/52/40.6 N 160/04/15.0 W	✓
559	1.9 m	^{6.6m} 3.6 fm	2356.9	58/52/27.5 N 160/03/56.0 W	Same as #380 and #385
				GP SCALED	
				ENS LARSEN	
				ENS NOLL	
206	1.6 m	^{7.3m} 4.0 fm	3483.0	58/52/10.4 N 160/03/52.3 W	✓
557	1.6 m	^{5.6m} 3.2 fm	2355.6	58/52/32.3 N 160/03/58.3 W	SAME AS #403, 409
				GP SCALED	
				ENS NOLL	
				Checked ✓	
				ENS McS	

RECOMMENDED ADDITIONAL INVESTIGATIONS

CONTACT NUMBER	CONTACT HEIGHT	WATER DEPTH	FIX NUMBERS	GP-POSITION LAT., LONG.
62	0.9 m	4.4 fm	3224.6	058/51/29N 160/02/23W
199A	undeter- mined *	3.4 fm	3470.0	058/52/10N 160/01/30W
256	0.9 m	4.8 fm	3776.7	058/51/50N 160/03/30W
577	0.9 m	4.7 fm	2403.1	058/51/25N 160/02/58W

* Rectangular-shaped object, approximate size of the wreck, with poor shadow.

ATTACHMENT F



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

February 12, 1988

N/CG243:GHM

TO: N/MOP211 - Dennis J. Hill
FROM: N/CG243 - George H. Mastrogiannis *George H. Mastrogiannis*
SUBJECT: Cancellation of Field Examination and Reissue as
Hydrographic Survey

The following field examination, FE-303, is canceled by direction
this date and reissued as H-10263.

Cancellation:

<u>Registry No.</u>	<u>Field No.</u>
FE-303	RA-5-2-87

Reissue:

<u>Registry No.</u>	<u>Field No.</u>	<u>Area</u>	<u>Project No.</u>
H-10263	RA-5-2-87	ALASKA BRISTOL BAY CENTRAL PORTION OF NUNAVACHAK BAY	OPR-R184

CC:

N/MOA23 - Wert
N/MOP21 - Richards
N/CG24x2 - Wellman
N/CG22x2 - STARS



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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	SMOOTH OVERLAYS: POS., ARC, EXCESS	3
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	2

DESCRIP-TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/SOURCE DOCUMENTS
ACCORDION FILES	1				
ENVELOPES					
VOLUMES					
CAHIERS					
BOXES			1		

SHORELINE DATA

SHORELINE MAPS (List):

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List): (attached to reports)

NAUTICAL CHARTS (List): 16011 31st Ed. June 29/85, 16315 2nd Ed. Jan 4/86, 16315 3rd Ed. Feb 20/87

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	EVALUATION	TOTALS
POSITIONS ON SHEET			1432
POSITIONS REVISED			
SOUNDINGS REVISED			106
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	EVALUATION	TOTALS
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	5		5
VERIFICATION OF SOUNDINGS	35		35
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	11		11
COMPARISON WITH PRIOR SURVEYS AND CHARTS		4	4
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		25	25
GEOGRAPHIC NAMES			
OTHER* Digitizing			
*USE OTHER SIDE OF FORM FOR REMARKS	TOTALS	51	29
			80

Pre-processing Examination by M. Mozgala, J. Miller	Beginning Date 9/30/87	Ending Date 3/3/88
Verification of Field Data by A. Luceno, R. Shipley, J. Stringham	Time (Hours) 40	Ending Date 4/10/88
Verification Check by B. Olmstead	Time (Hours) 16	Ending Date 4/19/88
Evaluation and Analysis by A. Luceno	Time (Hours) 29	Ending Date 5/4/88
Inspection by D. Hill	Time (Hours) 5	Ending Date 5/25/88

PACIFIC MARINE CENTER
EVALUATION REPORT
H-10263

1. INTRODUCTION

Survey H-10263 is a side scan sonar investigation of AWOIS item 50928, a sunken wreck (position approximate) charted at latitude 58°52'00.0"N, longitude 160°03'00.0"W, in Nunavachak Bay, Alaska. This survey was accomplished by the NOAA Ship RAINIER under the following Project Instructions.

OPR-R184-RA, dated March 6, 1987
CHANGE Number 1, dated March 20, 1987
CHANGE Number 2, dated June 2, 1987
CHANGE Number 3, dated August 10, 1987

Initial investigation of this wreck was performed in 1986, using conventional echo sounding techniques during survey H-10220. That investigation consisted of 50- to 200-meter sounding line spacings within a 0.5-nautical mile radius from the reported position. The investigation did not locate or adequately disprove the existence of this wreck.

Survey H-10263 was subsequently accomplished in 1987, as a side scan sonar investigation with simultaneous conventional echo sounding. This survey overlaps a section of the mainscheme portion of survey H-10220 in the central area of Nunavachak Bay. The search area extends to the required 0.75-nautical mile radius about the charted position of the reported wreck. The total surveyed area extends between latitudes 58°51'16"N and 58°52'45"N and longitudes 160°01'30"W and 160°04'30"W. The wreck remains undiscovered and is still not considered disproven. With the exception of areas where 200% side scan sonar coverage was not achieved, the survey merely provides evidence that the wreck does not exist within the required search area. The bottom is smooth and gently sloping with the probable existence of rocks and boulders widespread throughout the bay. The possible existence of rocks is evidenced by numerous contacts on both the sonargram and the echogram. The smooth sheet for this survey shows the results of the conventional echo sounding operations.

Registry number FE-303, originally assigned to this survey, was rescinded and the survey re-registered as H-10263.

There was no final field sheet submitted for this survey.

Predicted tides for Black Rock, Walrus Islands, Alaska were used for the reduction of soundings during the survey. Approved hourly heights zoned from Summit Island gage 946-5283 were used during office processing.

The field sheet parameters have been revised to center the hydrography on the smooth sheet and to change the projection to polyconic. TRA, sound velocity and electronic control correctors are adequate and required no revision. An accompanying computer printout contains the revised parameters.

A digital file, generated for this survey, includes categories of information required to comply with N/CG2 Hydrographic Survey Guideline No. 23, Completion of Digital Hydrographic Surveys, September 7, 1983. Certain descriptive information, however, may not be in the digital record due to the restrictions of the presently available cartographic codes. The user should refer to the smooth sheet for complete information.

2. CONTROL AND SHORELINE

Sections F and G of the hydrographer's report contain adequate discussions of horizontal control and hydrographic positioning.

Positions of horizontal control stations used during hydrography are 1948 published positions and a 1983 field value based on NAD 27. These values were used during office processing for the computation of positions. The smooth sheet and accompanying overlays are annotated with NAD 83 datum adjustment ticks based on values determined by N/CG121. Geographic positions based on NAD 83 may be plotted on the smooth sheet utilizing the NAD 27 projection by applying the following corrections:

latitude: 2.766 seconds (85.6 meters).
longitude: -7.901 seconds (-126.8 meters).

The year of establishment of control stations listed on the printout originates with published data and the hydrographer's signal list. The 1983 station year is subject to change pending certification of the data by NGS.

There are no weak fixes (angles of intersection less than 30 degrees or more than 150 degrees) noted on this survey.

There are no shoreline maps applicable to this survey.

3. HYDROGRAPHY

Hydrography is adequate to:

- a. delineate the bottom configuration, determine least depths, and draw the standard depth curves;
- b. reveal the probable existence of rocks and boulders throughout the bay. The possible existence of rocks is evidenced by numerous contacts recorded on the sonagram and isolated features depicted on the echogram, and;
- c. show the survey was properly controlled and soundings plotted correctly.

Soundings from two crosslines are generally 0.1 fathom and occasionally 0.2 fathom deeper than soundings from the mainscheme lines in depths of 2.6 to 4.7 fathoms. These are within the allowable +/-0.3 fathom difference in depths of 0-20 fathoms.

4. CONDITION OF SURVEY

The hydrographic records and reports received for processing are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change No. 3, the Hydrographic Survey Guidelines, and the PMC OORDER, except as noted in the attached copy of the Preprocessing Examination Report, dated March 3, 1988.

5. JUNCTIONS

No junctions were required.

6. COMPARISON WITH PRIOR SURVEYS

H-10220 (1986) 1:20,000

Survey H-10220 covers the entire Nunavachak Bay and approaches. Some depths from the present survey are 0.1 to 0.2 fathoms shallower than those acquired during the prior survey, which could be attributed to the increased density of soundings on the present survey. Section H of the Descriptive Report for Survey H-10220 mentions that the area within 300 meters of Nunavachak Bay is extremely foul with rocks. Many offshore rocks not depicted on the shoreline maps were found during the H-10220 survey. A large concentration of side scan sonar contacts that rise 0.9 to 1.5 meters from the bottom, as well as isolated features rising 1.0 to 1.5 meters from the bottom as recorded on the echogram, were detected in the northwest quadrant of the surveyed area extending to a distance of 3/4 nautical mile from the shore. A lesser concentration of side scan contacts were recorded in the northeast and southwest quadrants of the surveyed area. The density of these contacts gradually decreases as the distance from the shore increases to 1.1 nautical miles. Few contacts were recorded in the southeast quadrant of the area surveyed.

Survey H-10263 is adequate to supersede the prior survey within the common area.

There are no AWOIS items originating from H-10220 applicable to the present survey.

7. COMPARISON WITH CHART

Chart 16011, 31st Edition, dated June 29, 1985; scale 1:1,023,000

Chart 16315, 2nd Edition, dated January 4, 1986; scale 1:100,000

Chart 16315, 3rd Edition, dated February 28, 1987; scale 1:100,000

a. Hydrography The seven charted depths and the charted wreck within the area common to the survey originate with miscellaneous sources. These charted depths are 0.1 to 0.5 fathom shallower than depths obtained during the survey.

Survey H-10263 is adequate to supersede charted hydrography within the common area.

b. AWOIS AWOIS item 50928 is a submerged wreck, PA, charted at latitude 58°52'00.00"N, longitude 160°03'00.00"W. The investigation of this feature is adequately discussed in sections L and P of the hydrographer's report. The required 200% side scan coverage within a 0.75 nm radius from the reported position was achieved, except in a 0.16 sq.nm area south of latitude 58°51'33"N between longitudes 160°02'00"W and 160°04'00"W, where coverage ranges from 94% to less than 200%. In two other areas, centered at latitude 58°52'39"N, longitude 160°03'08"W and latitude 58°52'22"N, longitude 160°04'09"W, with a combined area of 0.01 sq.nm, 200% coverage was also not achieved. These holidays comprise 10% of the 1.77 sq.nm. circular search area within the total 2.25 sq.nm. area covered during this survey. Despite the small holidays the survey provides significant evidence the wreck is not located at the charted position, an area where the distance from the nearest shore is about one nautical mile with a depth of 26 feet. The log book from the sunken wreck, as well as the report from a witness who was present during the sinking, estimated the distance to the nearest shore to be 1/2 mile, with depths of 15 and 16 feet. This information indicates the wreck could be located farther east of the charted position in an area not covered by this survey. It is recommended that the wreck be retained at its charted location and consideration be given to adding the position qualifier, "PD", to indicate the doubtful nature of the present position.

c. Controlling Depths There are no charted channels with controlling depths within the area of this survey.

d. Aids to Navigation There are no floating or fixed aids located within the area of this survey.

e. Geographic Names The names appearing on the smooth sheet and in the survey title have been approved by the Chief Geographer.

f. Dangers to Navigation A report of dangers to navigation was generated during office processing regarding the existence of numerous rocks and boulders throughout Nunavachak Bay (copy enclosed). This information was reported to the USCG and to DMA.

8. COMPLIANCE WITH INSTRUCTIONS

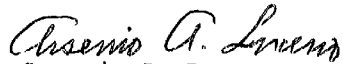
Survey H-10263 adequately complies with the Project Instructions with the following exception:

- a. the required 200% side scan coverage within the area mentioned in section 7b. of this report for the disproval of the wreck was not achieved, and;
- b. there is insufficient investigation of the significant side scan sonar contacts and the shoal features detected with the echo sounder.


9. ADDITIONAL FIELD WORK

This is an inadequate field investigation for the disproval of the sunken wreck due to the lack of adequate side scan coverage in some portions of the investigated area. The following is recommended:

- a. the areas of inadequate side scan coverage identified in section 7b of this report be surveyed;
- b. the area of investigation for the wreck be extended farther east of longitude 160°01'30" between latitudes 58°51'15"N and 58°52'45"N, an area approximately 1/2 mile from shore where the depths are 15 to 16 feet;
- c. investigate some of the representative contacts from the side scan sonar and the echo sounder to verify or disprove that these are scattered rocks and boulders as suspected;
- d. a note be included on the charts to warn mariners that depths within 1.1 nautical miles from the shore of Nunavachak Bay may be 0.5 to 1.2 fathoms less than charted due to the presence of undetected rocks and boulders, and;
- e. additional office research in an attempt to obtain better positioning information for the wreck. A significant amount of local inquiry has already been accomplished by the Nautical Chart Branch. Consideration should be given to coordinating any additional inquiries with the Branch to prevent unnecessary effort.


Arsenio A. Luceno
Cartographer

This survey has been examined and it meets Charting and Geodetic Services' standards and requirements for use in nautical charting. This survey is recommended for approval.


Dennis Hill
Chief, Hydrographic Section

APPROVALS

I have reviewed the smooth sheet, accompanying data, and reports associated with hydrographic survey H-10263. This survey meets or exceeds Charting and Geodetic Services' standards for products in support of nautical charting.

Thomas W. Roberts 6/6/88
Chief, Nautical Chart Branch (Date)

CLEARANCE:

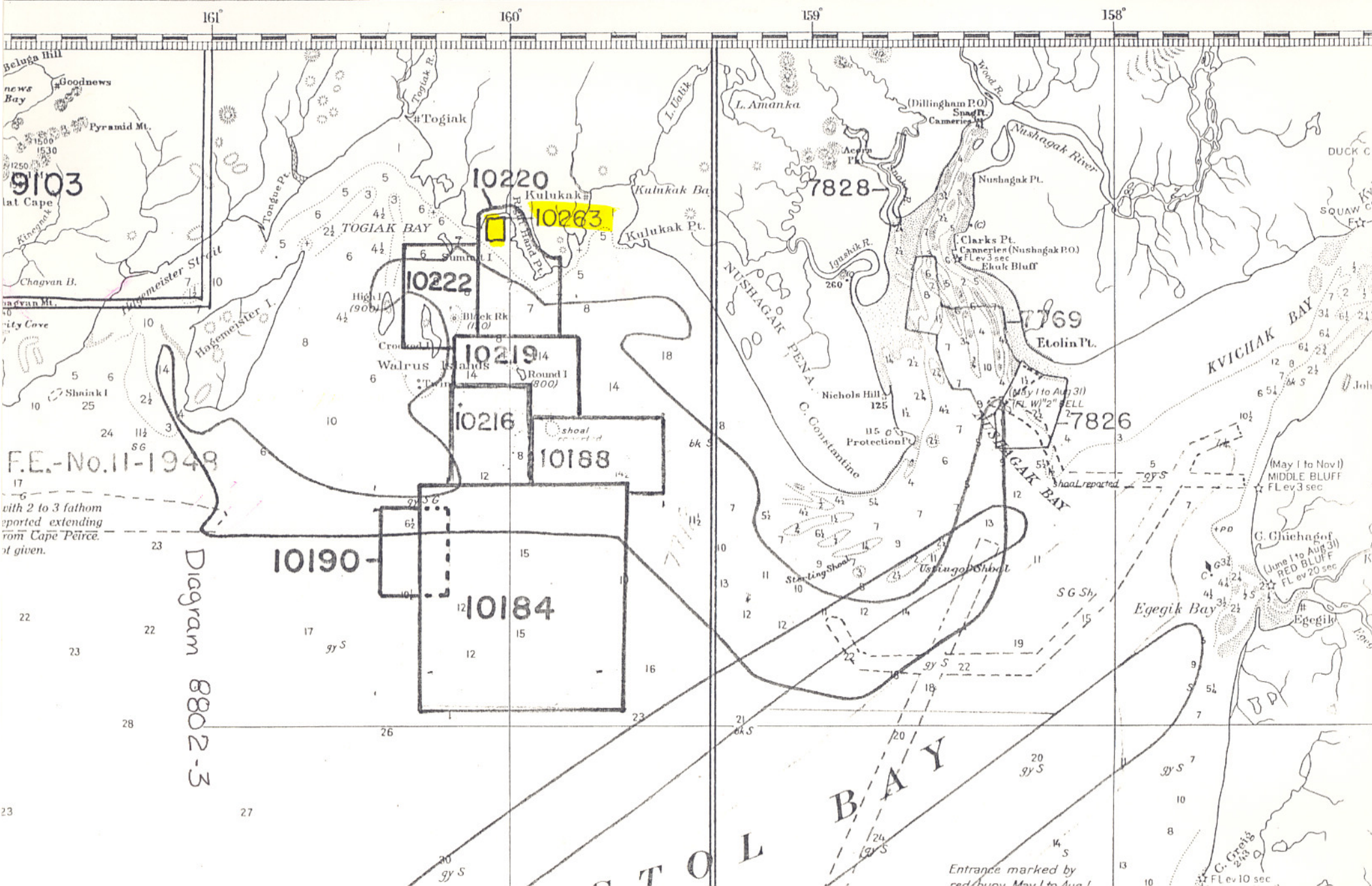
N/MOP2:LWMordock

SIGNATURE AND DATE:

[Signature] 6/6/88

After review of the smooth sheet and accompanying reports, I hereby certify this survey is accurate, complete, and meets appropriate standards.

[Signature] 6/6/88
Director, Pacific Marine Center (Date)



Beluga Hill
news Bay
Pyramid Mt.
1500
1530
9103
at Cape
Kinoyak
Chagvan B.
Hogemeister Strait
Hogemeister I.
Chagvan Mt.
ity Cove

F.E.-No. 11-1949

with 2 to 3 fathom reported extending from Cape Peirce of given.

Diagram 8802-3

10220

10263

10222

10219

10216

10188

10190

10184

ETOL BAY

Entrance marked by red buoy, May 1 to Aug 1

G. Chichagof RED BLUFF (June 1 to Aug 31) FL ev 20 sec

C. Gregg's 210' O. FL ev 10 sec

MARINE CHART BRANCH
RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10263

INSTRUCTIONS

- A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
- 1. Letter all information.
- 2. In "Remarks" column cross out words that do not apply.
- 3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
16315	10-7-88	Eli. Bodarvian	Full Part Before After Marine Center Approval Signed Via Drawing No. 4
16011	3-14-89	Russell Kennedy	Full Part Before After Marine Center Approval Signed Via Drawing No. 30 Applied through 16315
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
			Full Part Before After Marine Center Approval Signed Via Drawing No.
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Applied to charts 6-20-88 BR