

10316

Diagram No. 8202-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey ... Navigable Area Hydrographic ...

Field No. ... RA-5-1-89 ...

Registry No. ... H-10316 ...

LOCALITY

State ... Alaska ...

General Locality ... Lisianski Inlet ...

Sublocality ... Pelican Harbor and Vicinity ...

1989

CHIEF OF PARTY

CAPT J.C. Albright

LIBRARY & ARCHIVES

DATE ... September 10, 1990 ...

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

10316

17303 40,000

17300

17302 80,000

HYDROGRAPHIC TITLE SHEET

H-10316

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-5-1-89

State Alaska

General locality Lisianski Inlet

Locality Pelican Harbor and Vicinity

Scale 1:5,000 Date of survey October 10-15, 1989

Instructions dated September 26, 1989 Project No. S-0930-RA

Vessel NOAA Ship RAINIER, launches RA-4(2124), RA-5(2125), RA-6(2126)
skiff RA-8(2128)

Chief of party CAPT John C. Albright

Surveyed by LT Nichel, LTJG Glang, ENS Haines, ENS Muench

Soundings taken by echo sounder, hand lead, pole DSF 6000N; pneumatic depth gage

Graphic record scaled by RAINIER Personnel

Graphic record checked by RAINIER Personnel

Verification by: R.A. Shipley Automated plot by PHS Xynetics Plotter

~~Reviewed by~~

Evaluation by: C.R. Davies

~~Verification by~~

Soundings in fathoms ~~feet~~ at MLLW

REMARKS: Time in UTC. Revisions and marginal notes in black were generated
during office processing. All separates are filed with the hydrographic
data, as a result page numbering may be interrupted or non-sequential.

AWOIS & SURF CHK 10/4/90 MCR

SC-1-30-97

RWW

PROGRESS SKETCH

S-0930-RA
HYDROGRAPHIC SURVEY
PELICAN HARBOR, ALASKA

OCTOBER 9-15, 1989

NOAA SHIP RAINIER

JOHN C. ALBRIGHT, CAPT., NOAA
COMMANDING

SCALE OF CHART 17303

57° 59'

LISIANSKI INLET

57° 58'

CHICHAGOF ISLAND

Pelican

57° 57'

RA-5-1-89
H-10316

57° 56'

57° 55'

- 0.64 SQ. N. M. SOUNDING
- 51.6 L.N.M. SOUNDING
- 15.0 L.N.M. MISC. DISTANCE
- 34 BOTTOM SAMPLES (GRAB)
- 6 ELECT. CONTROL STATIONS
- 1 TEMP DEPTH SOUND VEL. CAST
- 0 NANSEN CAST
- 1 TIDE GAGE
- 3 WATER SAMPLES ANALYZED
- 2 GEODETIC CONTROL STATION EST.

2 AWOIS ITEMS INVESTIGATED - 51772 VERIFIED
51773 DISPROVED

136° 15'

136° 10'

Descriptive Report to Accompany Hydrographic Survey H-10316

Field Number RA-5-1-89

Scale 1:5,000

1989

NOAA Ship RAINIER
Captain John C. Albright, NOAA
Chief of Party

A. PROJECT ✓

This navigable area hydrographic survey was completed in Lisianski Inlet, Alaska as specified by Project Instructions S-0930-RA dated September 26, 1989.

The survey was conducted in response to requests from the southeastern Alaska Pilots' Association to verify the existence of a submerged rock at the entrance of Pelican Harbor which was reportedly struck by a Japanese cargo ship in an area charted as 10 fathoms.

B. AREA SURVEYED ✓

The survey is located in southeast Alaska, in Lisianski Inlet and is centered around Pelican Harbor. The survey is bounded on the north and east by Chichagof Island, extends west to the middle of Lisianski Inlet, and south to latitude of $57^{\circ}56'15''N$. Data acquisition was conducted from October 9-15, 1989 (DN 282₁₀ - DN 288₃).

The eastern shore is generally steep and free of ledges although there is a mud and gravel flat at the entrance to Pelican Creek. The small islands and islets in the survey area are surrounded by ledges and rocky reefs. The town of Pelican, which includes a cannery, several piers and a ferry slip, lies in the northern survey area. The bottom is primarily composed of green mud, black sand, broken shell and pebbles.

C. SOUNDING VESSELS ✓

All data were acquired from three automated survey launches, and one Boston Whaler aboard NOAA ship RAINIER as shown below:

<u>Vessel</u>	<u>EDP No.</u>	<u>Operation</u>
RA-4	2124	Hydrography
RA-5	2125	Hydrography
		Bottom Samples
		AML Cast
RA-6	2126	Hydrography
		Shoreline Verification
RA-8	2128	Shoreline Verification

No changes to the standard sounding configurations were necessary.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS ✓

All survey launches were equipped with the Raytheon DSF-6000N echo sounders shown below. The echo sounders were operated in the HIGH + LOW (HIGH DIGITIZED) function, using manual gain controls on both high and low frequencies to obtain the best analog trace. Variations in the instrument initial, stylus arm length, and belt tension are not present in these echo sounders. 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. The echo sounders were operated 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.

Raytheon DSF-6000N Echo Sounders

<u>Vessel</u>	<u>Serial No.</u>	<u>DN</u>
2124	A119N	283
2125	A117N	283-288
2126	B048N	283-286

The echo sounders were continuously monitored during data acquisition. All sounding data were scanned at least two times, not only to ensure all significant peaks and deeps were inserted, but also to verify the digitized depths. While running over steep areas, the echo sounders sometimes failed to track properly. Running at minimum speeds usually alleviated this problem, but marginal analog traces could not always be avoided.

Diver-obtained least depths were determined with a 3D Instruments pneumatic depth gage (S/N 8504192N). The gage was operated in accordance with Hydrographic Survey Guideline #55, and was last calibrated March 1, 1989 by the Pacific Operations Group (N/OMA 1214). In addition, field system checks were performed each day the pneumatic gage was used.

Corrections to Echo Soundings ✓

Corrections to echo soundings were determined for static draft, heave, velocity of sound through water, settlement and squat, and predicted tides. All correctors were applied to the final field sheets. Sounding correctors apply to both narrow and wide beams of the echo sounder. Supporting data and computations for all corrections to echo soundings, except heave, are appended to this report.

Static Draft ✓

For all launches, the distance from the transducer face to the gunwhale was measured with a large metal carpenter-square. Static draft measurements were then determined by dropping a leadline from the gunwhale to the water and subtracting this distance from the distance measured with the carpenter-square. The measurements from the gunwhale to the waterline were conducted with the fuel tanks averaging 3/4 full and three people aboard. A transducer depth of 0.3 fathom was determined for all launches on February 10, 1989. This transducer depth agrees with the launches' historical records.

Heave✓

Corrections for heave were applied while scanning. The scanning technique used in comparing the analog trace with the digital record was chosen to eliminate fluctuations greater than 0.2 fathom resulting from sea action.

Sound Velocity✓

Data required to compute the correctors for the velocity of sound through water were obtained with an AML SVP Profiler, S/N 3004, which was calibrated at the Northwest Regional Calibration Center in Bellevue, WA on October 17, 1988.

On DN 285, one AML cast was taken at $57^{\circ}57.0'N$, $136^{\circ}13.5'W$ to a depth of 130.8 meters. Velocity correctors were computed at 0.1-fathom increments using the PC program VELOCITY, and were applied to all echo sounding data via velocity table #1. An HDAPS listing of this table is appended to this report. *

Settlement and Squat✓

Settlement and squat correctors were determined for the automated survey launches in Shilshole Bay, WA on February 23 and March 3, 1989. All tests were conducted over a hard bottom in depths well exceeding seven times the vessels' drafts. Both sea and wind were calm. Observations were made through a Zeiss Ni2 leveling instrument (S/N 103453) to a rod held vertically on deck, directly over the transducer.

Ten 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 tidal height differences were normalized to the tidal height of the dead-in-the-water level readings before the correctors were computed.

The settlement and squat correctors used on-line are listed in Offset Table 1, a copy of which is appended to this report. *

Tide Correctors✓

Tidal zoning and correctors applicable to predicted tides for the Sitka, Alaska tide station (945-1600) were provided in Section 5.9 of the Project Instructions. A height correction ratio of "x 1.06" was applied to the Sitka predicted tide values; no corrections to the times of high and low water were necessary. An HDAPS listing of the data used in generating tide correctors is appended to this report. *

One tide station in Pelican Harbor (945-2611) was established and maintained by RAINIER personnel. The field tide records and the Field Tide Note for this station have been forwarded to N/OMA121 in accordance with Hydrographic Survey Guideline #50 and Section 4.3 of the Field Procedures Manual (FPM). A request for approved tides has been forwarded to N/OMA121. Copies of the Field Tide Note and the request for approved tides are appended to this report. *

* Filed with the hydrographic data

E. HYDROGRAPHIC SHEETS ✓

All field sheets were prepared aboard RAINIER, on an automated Bruning Zeta 924-A plotter. The HDAPS system draws graticules based on a Universal Modified Transverse Mercator projection. The 1:5,000-scale final field sheet is designated RA-5-1-89. The final field sheet has an accompanying 1:5,000-scale sheet showing detached positions and one shoal development. One 1:2,500-scale sheet shows soundings from the investigation of AWOIS #51772.

Depth contours are drawn on the final field sheet in accordance with the Hydrographic Manual except in areas of steep bathymetry where all prescribed contours could not be drawn without degrading the legibility of the plotted soundings.

All field sheets, accompanying field records, and this Descriptive Report were forwarded to the Pacific Hydrographic Section (N/CG245) for ~~verification~~
office processing

F. CONTROL STATIONS ✓

A listing of the geodetic stations used to control this survey is appended to this report. A "*" on the listing marks stations located on offshore islands where the stations' symbols may obscure the depiction of the islands' shoreline.

Positions for all existing stations are from the NGS data base. These stations were recovered in accordance with methods stated in FPM 5.2.4. One new station, PELICAN ENTRANCE LIGHT, was positioned in 1989 by RAINIER personnel with angle and distance measurements. A position was also determined for the U. S. Army Corps of Engineers disk located on the seaward end of the breakwater. This position was used to tie blueprint angles and distances for a submerged sewer outfall. The field positions for these new stations are unadjusted. All stations meet or exceed Third-order, Class I standards for positioning. Geographic positions are based on the North American Datum of 1927 and Clarke Ellipsoid of 1866. Further information can be found in the Fall 1989 Horizontal Control Report for S-0930-RA which was forwarded with this report.

G. HYDROGRAPHIC POSITION CONTROL ✓

Soundings and bottom samples were located using Motorola Mini-Ranger Falcon 484 microwave, multi-range positioning equipment. One diver-obtained least depth and several shoreline detached positions were positioned via range/azimuth method. Soundings acquired along pier faces were positioned by estimating distances from each pier ("see field sheet" method). See Section 2 of Final Report for position of "SFS" soundings
Positioning Equipment ✓

Three Mini-Ranger Falcon 484 console/R-T pairs and six shore transponders were used during the survey. The following tables summarize the mobile and shore equipment used.

Mobile Equipment

<u>EDP No.</u>	<u>Vessel</u>	<u>Equipment</u>	<u>Console/R-T</u>	<u>DN</u>
2124	RA-4	Falcon	D0051/911615	283
2125	RA-5	Falcon	F0245/B1405	283-288
2126	RA-6	Falcon	F0247/D2395	283-286

Shore Equipment

<u>Transponder Serial No.</u>	<u>Code</u>	<u>Transponder Serial No.</u>	<u>Code</u>
C1883	B	D2384	1
F3256	E	B1106	2
G3501	F	E2713	3

One diver-obtained least depth and several shoreline detached positions were acquired by VESNO 2128 using range/azimuth methods from stations COLE(102) and PELICAN ENTRANCE LT(106). The equipment used for positioning were a Wild T2 Theodolite (S/N 320734) and a Wild DI-3000 EDM (S/N 67306).

Baseline Calibrations ✓

Opening baseline calibrations were conducted over water in accordance with FPM 3.1.2.1. The calibrations occurred on Lake Union, Seattle, WA on DN 262-272 over a known baseline of 966m (MR CAL 2). Closing calibrations will be completed at the end of November in Seattle, WA. Opening baseline calibration data and a description of the baseline are appended to this report. The correctors applied to all on-line data are included in C-O tables which are appended to this report.

Filed with the hydrographic data.

The final field sheets were plotted with the opening baseline calibration correctors. The hydrographer recommends that these opening correctors be used in preliminary position plots. If, after completing closing baseline calibrations, the differences between opening and closing calibrations exceed the allowable limits stated in FPM 3.1.2.3, the hydrographer will forward to N/CG245 the recommended prorated correctors. *Data processed using opening baseline calibration.*

System Check Procedures ✓

Critical systems checks were conducted in accordance with FPM 3.1.2.2. Printouts of HDAPS screen graphics displaying multiple lines of position confirmed that the error circle radius and maximum residual did not exceed allowable rejection limits.

Problems and Unusual Position Configurations ✓

Null zones and erratic ranges were occasionally experienced due to the destructive interference of direct and reflected microwaves. Signals from one or more shore stations were also periodically lost when acquiring sounding data behind islands. Time-and-course interpolations were used during data processing to correct the position of soundings taken when launches approached null zones or ran behind islands (as indicated by the launches' erratic steering needles and higher ECR and residual values).

Antenna Offset Distances (ANDIST) ✓

The ANDIST corrector was 0.0 meters for all launches as each launch had its antenna located over the transducer. The correctors for each launch's antenna offset distance is included in offset table #1. *Filed with the hydrographic data.*

H. SHORELINE *See EURL Report Section 2*

Shoreline features on the final field sheet were transferred from a 1:5,000-scale enlargement of cartographic revision print CRS 002389 ("print"), which was compiled from 1988 NOS photography. The transferred shoreline is shown in brown on the final field sheet for orientation purposes only. *Dash red shoreline was transferred from the final field sheet and connects in the raw data.*

In general, the print accurately portrays the survey area. The positions of the piers and the ferry slip are correct; only the smallest of four dolphins which exist at the ferry slip was depicted on the print. Each of the dolphins was located with an angle and distance measurements from station COLE and check distances from PELICAN ENTRANCE LIGHT. *See section L of this report for positions of the dolphins and see EURL Report section 2.*

The feature at $57^{\circ}57'40''\text{N}$, $136^{\circ}13'37''\text{W}$ which was labeled on the print as possible storage tanks, is in fact, fuel tanks.

The feature at $57^{\circ}57'57''\text{N}$, $136^{\circ}13'50''\text{W}$ which was labeled as a possible tower, is a church spire which was positioned to Third-order, Class I specifications, and is recommended as a landmark on NOAA form 76-40.

The feature at $57^{\circ}57'41''\text{N}$, $136^{\circ}13'59''\text{W}$ which was labeled as a possible pier with small boats alongside is a small ~~deck~~ ² *pier*. All the above features are shown on the final field sheet. *The pier and church spire are shown on the smooth sheet.*

There were no negative tides during daylight hours while the survey was in progress. However, observations made at the lowest water during daylight hours indicated that ledges and foul areas were more extensive than shown on the print. Detached positions (DP's) were obtained on all rocks, ledges and foul areas which extended into the navigable area. All verified features and features not depicted on the print are shown on the final field sheet in black. All heights are in feet and are reduced to MLLW based on predicted tides. The heights of rocks and ledges refer to the highest portion of each feature. Cartographic codes are noted in the field records.

I. CROSSLINES ✓

A total of 8.4 nautical miles of crosslines were run perpendicular to the mainscheme sounding lines, representing 16% of the mainscheme hydrography. Crossline soundings agree very well (within one fathom) with mainscheme soundings. In several instances, the vessel acquiring the crossline data did not acquire the mainscheme data. The agreement between soundings obtained by different echo sounders in a common area is as stated above.

J. JUNCTIONS ✓

There are no contemporary surveys which junction with this survey.

K. COMPARISON WITH PRIOR SURVEYS ✓

This survey was compared with prior survey H-4003 (1:20,000; 1917). In general, survey soundings agree within ~~two~~ ^{three} fathoms of H-4003's depths, with the prior survey's depths being deeper.

The 10-fathom curve in Pelican Harbor has accreted seaward by as much as 200 meters. A shoal approximately 50 meters wide and 175 meters long exists inshore of the 10-fathom curve, and is centered at $57^{\circ}57'27''\text{N}$, $136^{\circ}13'51''\text{W}$. Depths on this shoal range from 1.6 to 5.6 fathoms. The shoal was developed as part of the investigation of AWOIS #51772, which is discussed in Section L of this report.

Two other shoals were discovered and positioned during this survey. The first is a 50-meter by 30-meter plateau oriented northwest/southeast, with a diver-obtained least depth of 9.87 fathoms at $57^{\circ}56'24.2''\text{N}$, $136^{\circ}12'16.1''\text{W}$ (DN285; duplicate Pos. No. 6432). Prior survey depths in the area are 38 fathoms. The second shoal is a 30-meter wide north/south ridge which was developed with 25-meter line spacing (DN 284; Pos. Nos. 6309-6345). Prior survey depths in the area are 8 fathoms. A diver-obtained least depth of 5.5 fathoms was found at $57^{\circ}56'45.2''\text{N}$, $136^{\circ}12'45.0''\text{W}$ (DN285; Pos. No. 6433). Dive investigation forms which contain detailed descriptions of the features are included within the survey data. The least depths of these two features were reported as dangers to navigation to the Seventeenth Coast Guard District and to Defense Mapping Agency Hydrographic/Topographic Center (DMAHTC). *Attached to this report.*

The techniques used for positioning and sounding during the prior survey are the most probable causes for any discrepancies. Runoff from streams and the cannery is another probable cause for shoaling within Pelican Harbor. The hydrographer recommends that the soundings from this survey be used to supersede the prior *canary* survey within their common area.

L. COMPARISON WITH THE CHART *See Encl Report section 7*

This survey was compared to NOS Charts 17303 (6th edition; Jul 19/80; 1:40,000; NAD 27 and 1:10,000 NAD 27 inset of Pelican Harbor), 17302 (15th edition; May 20/89; 1:80,000; NAD 83) and 17300 (25th edition; Apr 29/89; 1:209,978; NAD 83). All charted depths originate from the prior survey discussed in Section K except for nine charted depths within the inner harbor.

The 1:10,000 scale inset of Pelican Harbor on Chart 17303 contains nine depths derived from prior surveys other than H-4003. Four of these depths come from U. S. Corps of Engineers Condition Survey BP110195-6 (1:6,000 scale; 1973), three depths from U. S. Corps of Engineers Condition Survey BP57184 (1:2,400 scale; 1958), and two depths from U. S. C&GS Chart Letter CL359/56 (1:4,800 scale; 1956). In general, prior depths compare within 0.5 fm. The 1/4-fm depth at 57°57'34"N, 136°13'31"W (BP110195-6) is now part of a filled area (see final field sheet). The 1/4-fm depth at 57°57'31"N, 136°13'30"W (BP57184) is now part of the southeast portion of the small boat basin where depths of 1.8-2.0 fms were found. The hydrographer recommends that soundings from this survey be used to update the chart. *Canun*

Two AWOIS Items, cataloged in the AWOIS listing dated September 14, 1989, lie within the limits of this survey.

AWOIS Item #51772: Rock reported submerged 10 feet at 57°57'28.5"N, 136°13'52.0"W. The rock was reported struck by a Japanese cargo ship in September 1989.

Investigation: The area was developed with 10-meter line spacing in a northeast/southwest orientation (DN 283, Pos. Nos. 4000-4015; DN 287, Pos. Nos. 5343-5381). Depths of 5-15 fathoms were found at the position stated in the AWOIS listing. A shoal extending 175 meters in a northwest/southeast direction was found approximately 150 meters southeast of the position reported. A least depth of 1.65 fms was found at 57°57'24.9"N, 136°13'47.7"W (NAD 27) on the rock shoal's highest point by divers using a pneumatic depth gage (DN 288, Pos. Nos. 6432). The dive investigation form which contains a detailed description of the feature is included within the survey data.

A second high point was located on the northern part of the shoal. An echo sounder least depth of 2.4 fathoms was obtained at 57°57'27.8"N, 136°13'53.9"W (NAD 27) (DN 287, Pos. No. 5371-5371+1). The two least depths on the shoal were reported as dangers to navigation to the Seventeenth Coast Guard District and the DMAHTC. *Letters attached to this report.*

Recommendations: Delete 11 fathom depth charted at 57°57'23.5"N, 136°13'48.0"W. Chart 1-1/2 fathoms and 2-1/2 fathoms at 57°57'24.9"N, 136°13'47.7"W (NAD 27) and 57°57'27.8"N, 136°13'53.9"W (NAD 27), respectively. Revise the depth curves within Pelican Harbor to correspond with new sounding data. *Canun Chart according to the smooth sheet.*

AWOIS Item #51773: Discrepancy in the positions of charted dolphins.

57°57'28.0"N, 136°13'35.60"W

Investigation: Four visible dolphins exist in the vicinity of the ferry slip. Three large dolphins mark the approach to the ferry slip; the fourth (and smallest) dolphin lies along the north side of the slip. The area around the large dolphins was developed with 25-meter line spacing in northeast/southwest and northwest/southeast directions (DN 284; Pos. Nos. 5283-5286, DN 286; Pos. Nos. 6636-6638, 6645-6649, and DN 287; 5371-5379). Diver investigations consisting of 100-meter diameter circle searches centered on each of the three existing dolphins did not reveal any sign of submerged dolphins, debris or ruins. The bottom has gently rolling topography with mud and sand composition in this area. Positioning of the four dolphins is discussed in Section H of this report.

Recommendations: Remove dolphins shown on the 1:10,000-scale inset on Chart 17303. Chart the four dolphins at 57°57'28.7"N, 136°13'36.0"W; 57°57'28.9"N, 136°13'34.4"W; 57°57'28.3"N, 136°13'33.6"W; and 57°57'29.6"N, 136°13'32.7"W. *COM cur*

Non-Sounding Features

In general, all non-sounding features do exist at the positions charted with the exception of features within Pelican Harbor. New piers that have been constructed are not reflected on the 1:10,000-scale inset of Pelican Harbor (Chart 17303). Several charted rocks approximately 0.1 NM south of the offshore end of the breakwater were part of a larger foul area, and some ledges around the three charted islands were found to be more extensive.

Two uncharted piles were located at 57°57'16.0⁸⁷N, 136°12'54.9"W and 57°57'16.3¹N, 136°12'55.8⁷⁷W. The hydrographer recommends the piles be charted at the positions given above. *COM cur*

The micro wave tower charted at 57°57'38"N, 136°13'51"W was taken down approximately one year ago. No structure of any size remains; residents of Pelican know of no future plans to erect another tower. The micro wave tower was recommended for deletion from the chart on NOAA Form 76-40. *Attached to this report*

The piling charted at 57°57'33"N, 136°13'27"W was searched for visually at low tide when the mud flat was dry. No sign of the piling was evident. The hydrographer recommends that the piling charted at the above position be deleted. *COM cur*

Recommendations: The hydrographer recommends that the positions of the dolphins charted offshore of the ferry slip be revised as discussed in Section H and AWOIS #51733, and that the configuration of the small boat basin be updated as shown on the ~~final field~~ ^{smooth} sheet and CRS #002389. *COM cur*

Dangers to Navigation ✓

Four dangers to navigation originating from three dive investigations and one echo sounder development, which were discussed in Sections K and L of this report, were reported to the Seventeenth Coast Guard District and the DMAHTC by radio message and letter. Copies of the correspondence are appended to this report. Position numbers assigned to the dangers are noted on the radio message.

Three additional dangers were documented during office processing. Letter is attached to this report.

M. ADEQUACY OF THE SURVEY ✓

This survey is complete and adequate to be used for charting purposes, and to supersede prior surveys within the common navigable areas. *COM cur*

N. AIDS TO NAVIGATION ✓

One fixed aid to navigation lies within the limits of this survey. The position for PELICAN ENTRANCE LIGHT was determined to Third-order, Class I specifications per Section 4.2.1 of the Project Instructions. The unadjusted field position was checked against published and charted positions; the comparisons are shown below:

<u>Navigational Aid Light List No.</u>	<u>Published Position *</u>	<u>Charted Position</u>	<u>Field Position (NAD 27)</u>
Pelican Entrance Light 24315 (Fl W 4s)	57°57.3'N 136°13.6'W	57°57.3'N 136°13.6'W	57°57'22.1" ^{0.57} N 136°13'41.3" ²⁸⁵ W

*Source: United States Coast Guard Light List, Volume VI, 1988.

The light characteristics given above were observed in the field and agree with the charted and light list characteristics.

One landmark, a church spire, was also positioned. NOAA Form 76-40^{*} includes the positions of the fixed aid to navigation and the church spire. Columns on the form labelled "D.P." and "D.M." were completed for chart 17303 (NAD 27). The conversions for lengths of terrestrial arcs of meridians and parallels are not updated for NAD 83 positions. *Church Spire, 1989 is shown on the smooth sheet.*
** Attached to this report. The micro wave tower should be deleted from the chart.*
 There are no floating aids to navigation, bridges, or overhead cables within the limits of the survey. A new city sewage pipeline was recently laid in the vicinity of the breakwater and Pelican Entrance Light. Blueprints^{**} for the location of the new sewer outfall were received from the project's engineering manager, and are appended to this report. The submerged pipeline is shown in black on the ~~final~~ *smooth* field sheet. *** Filed with the hydrographic data.*

A ferry terminal pier serviced by the Alaska State Ferry System exists along the north side of the harbor's breakwater.

O. STATISTICS ✓

<u>Vessel:</u>	<u>2124</u>	<u>2125</u>	<u>2126</u>	<u>2128</u>	<u>Total</u>
# of Pos	80	387	685	27	1179 ⁰³
NM Hydro	5.7	14.6	32.6	--	52.9
NM ² Hydrography	0.64		Velocity Casts		1
Detached Positions	47		Tide Stations		1
Bottom Samples	35		Current/Magnetic Stations		0

P. MISCELLANEOUS ✓

Bottom samples were acquired on shoals and as specified in Section 6.7 of Project Instructions. Bottom sample positions and descriptions were entered into Contact Tables #1 and 2 for ease of plotting. Listings of the contact files are appended to this report. Bottom samples were not submitted to the Smithsonian Institution in accordance with project instructions.

No current measurements were made during this survey, since no anomalous current conditions were observed.

The format recommended in Hydrographic Survey Guideline #66 for reporting dangers to navigation was modified for submission by radio message. All the information required in the guideline was included in the radio message forwarded from RAINIER.

Q. RECOMMENDATIONS ✓

Several local fishermen commented on the lack of Loran-C grids on charts depicting inland waterways. They stated that all their navigation is done by Loran-C receivers, and requested that Loran-C grids be overlaid on all U.S. charts of southeast Alaska.

Action deferred to N/CG 24, 22

Deep-draft vessels and ferries regularly maneuver within the harbor. The hydrographer recommends USCG consider establishing a bouy to mark the shoal.

Action deferred to N/CG 24, 22

R. AUTOMATED DATA PROCESSING ✓

HDAPS programs "SURVEY" (version 3.03), "FILESYS" (version 1.20), and "POSTSUR" (version 3.03) were used in the creation of all field sheets, and the acquisition and processing of data. Version 4.00 of "POSTSUR", field-modified to plot without position numbers, was used in plotting the final field sheets. The survey data and project files were forwarded to N/CG245 on one 32-track tape cartridge and one floppy disk, respectively. A listing of the acquisition and processing hardware components is appended to this report.

S. REFERRAL TO REPORTS ✓

The following supplemental reports contain additional information relevant to this survey:

<u>Title</u>	<u>Date Sent to N/CG 245</u>
1989 Horizontal Control Report for S-0930-RA	December, 1989
1989 Electronic Control Report for S-0930-RA	November, 1989
1989 Coast Pilot Report, S-0930-RA	December, 1989

Respectfully Submitted,



Thomas A. Niichel
Lieutenant, NOAA

Approved and Forwarded,



John C. Albright
Captain, NOAA
Commanding Officer

NAVISOFT 300 4.00

PRE-SURVEY: CONTROL STATION TABLE

Station No	Type	Lat	Lon	H	Cart	Freq	Vel	Code	MM/DD/YY
100	F	057:56:01.705	136:11:16.797	8	250	0.0	0	1	10/09/89
101	F	057:57:45.714	136:14:07.461	3	250	0.0	0	E	10/09/89
102	F	057:56:57.207	136:14:34.096	2	250	0.0	0	3	10/09/89
103	V	057:56:30.417	136:13:38.151	1	139	0.0	0		00/00/00
104	F	057:56:36.142	136:12:39.725	1	250	0.0	0		10/09/89
105	F	057:55:59.734	136:12:35.607	1	250	0.0	0	F	10/09/89
106	F	057:57:22.051	136:13:41.285	7	250	0.0	0	2	10/12/89
107	F	057:57:07.676	136:13:12.640	1	250	0.0	0	B	10/09/89
		000:00:00.000	000:00:00.000	0	0	0.0	0		00/00/00
		000:00:00.000	000:00:00.000	0	0	0.0	0		00/00/00
		000:00:00.000	000:00:00.000	0	0	0.0	0		00/00/00
		000:00:00.000	000:00:00.000	0	0	0.0	0		00/00/00

STATION NO.	STATION NAME
100	AXEL 1917
101	BOUT 1917
102	COLE 1917
105	NORT 1917
106	LIGHT 1989 (PELICAN ENTRANCE LIGHT)
107	SAND 1917



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

NOAA Ship RAINIER
1801 Fairview Avenue East
Seattle, Washington 98102-3767

October 16, 1989

Director
DMAHTC
6500 Brooks Lane
Washington, DC 20315

Dear Sir:

While conducting hydrographic survey operations in and near Pelican Harbor, Alaska, the NOAA Ship RAINIER discovered four dangers to navigation. They have been reported to DMAHTC (NAYWARN) and the Seventeenth Coast Guard District. A copy of the correspondence describing them is enclosed.

Sincerely,

John C. Albright
Captain, NOAA
Commanding Officer

Enclosures





U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
NOAA Ship RAINIER S221
1801 Fairview Avenue East
Seattle, Washington 98102-3767

October 16, 1989

Commander
Seventeenth Coast Guard District
Post Office Box 3-5000
Juneau, Alaska 99802

Dear Sir:

Attached is a confirmation copy of the radio message sent to your office regarding dangers to navigation which I recommend for inclusion in the Local Notice to Mariners for the Seventeenth Coast Guard District. A copy of a chartlet showing the areas in which the dangers exist is also attached.

Sincerely,

John C. Albright
Captain, NOAA
Commanding Officer

Enclosures

cc: DMAHTC
N/CG221
N/MOP



JLA

NOJ DE WTEF

T

PTTUZYUW RUHPTEF2411 2912250-UUUU--RUHPSUU.

ZNR UUUUU

P182250Z OCT 89

FM NOAA S RAINIER

TO CCGDSEVENTEEN JUNEAU AK

DMAHTC (NAVWARN) WASHINGTON DC//MCNM//

INFO NOAA MOP SEATTLE WA

ACCT CM-VCAA

BT

UNCLAS

NOAA SHIP RAINIER HAS FOUND FOUR DANGERS TO NAVIGATION IN AND NEAR PELICAN HARBOR, LISIANSKI INLET, ALASKA (PROJECT S-0930-89) WITHIN THE LIMITS OF HYDROGRAPHIC SURVEY H-10316 (PELICAN HARBOR AND VICINITY). FOLLOWING INFORMATION IS PROVIDED FOR PUBLICATION IN LOCAL NOTICE TO MARINERS:

CHARTS AFFECTED: 17303' 6TH'ED 1:40,000' JUL 19/80' NAD27'
17302' 15TH'ED 1:80,000' MAY 20/89' NAD83'
17300' 25TH'ED 1:209,978' APR 29/89' NAD83'

CHART: 17303' 17302' 17300'

A. SHOAL COVERED 2-1/2' FMS AT: 57/57/27.8N' 57/57/26.5N'
136/13/53.9W' 136/14/00.5W'
B. ROCK COVERED 1-1/2' FMS AT: 57/57/24.9N' 57/57/23.6N'
136/13/47.7W' 136/13/54.3W'
C. ROCK COVERED 5-3/4' FMS AT: 57/56/45.2N' 57/56/43.9N'
136/12/45.0W' 136/12/51.6W'
D. ROCK COVERED 9-3/4' FMS AT: 57/56/24.2N' 57/56/22.9N'
136/12/16.1W' 136/12/22.7W'

DEPTHS ARE REDUCED TO MLLW BASED ON PREDICTED TIDES.
GEOGRAPHIC POSITIONS ARE BASED ON CHART DATUMS (NAD27 OR NAD83).

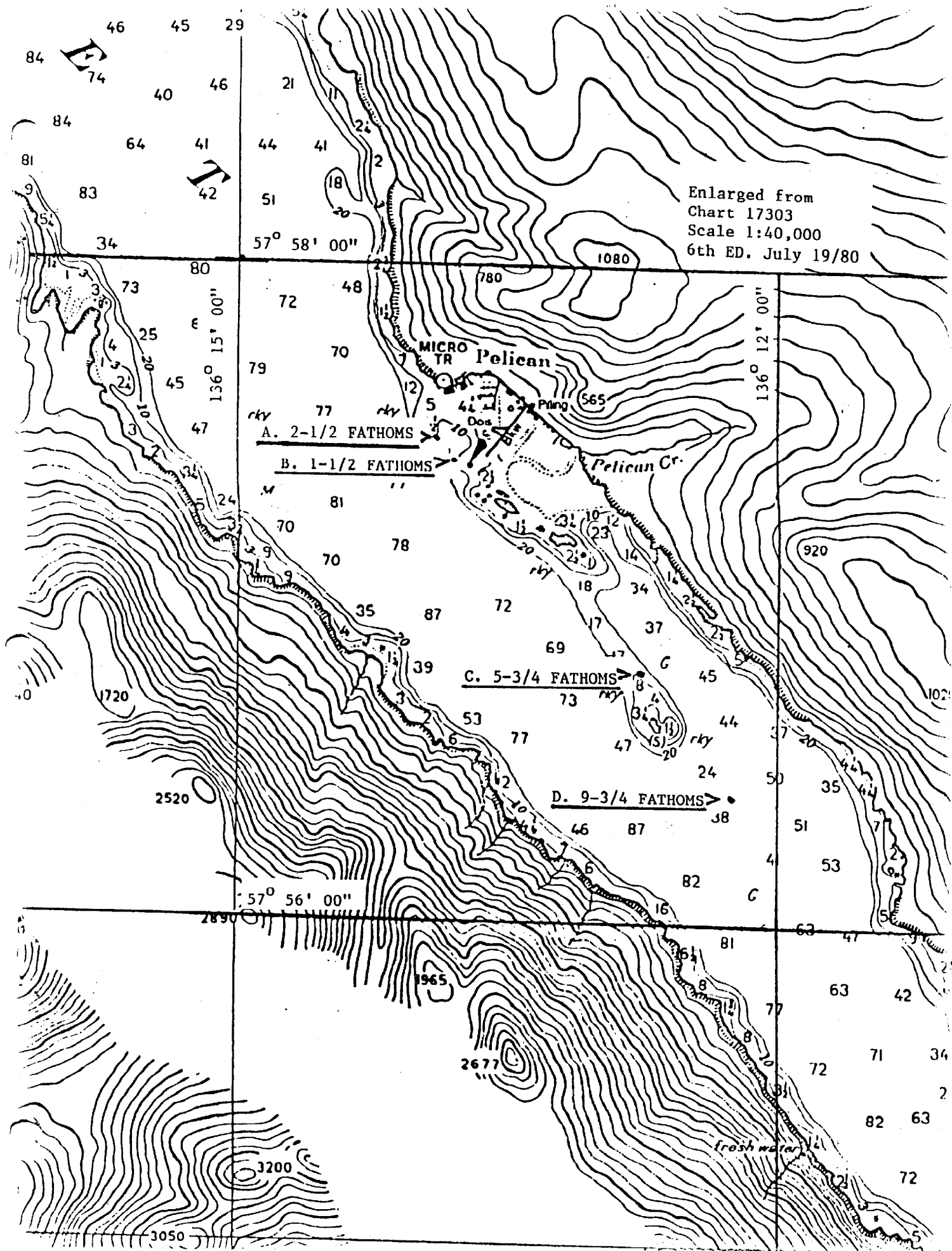
THIS IS ADVANCE INFORMATION SUBJECT TO OFFICE REVIEW.
QUESTIONS CONCERNING THIS MESSAGE SHOULD BE DIRECTED TO THE CHIEF, PACIFIC HYDROGRAPHIC SECTION AT (206) 526-6835. A LETTER WITH ATTACHED CHARTLETS IS BEING MAILED TO CONFIRM THIS MESSAGE.

BT

#2411

NNNN

NOJ 182308Z OCT 89
MC 6423



Pacific Hydrographic Section
7600 Sand Point Way NE
Seattle, WA 98115-0070

August 15, 1990

Commander (OAN)
Seventeenth Coast Guard District
P.O.Box 3 - 5000
Juneau, Alaska 99802-1217

Dear Sir:

During office review of hydrographic survey H-10316, Alaska, Lisianski Inlet, Pelican Harbor and Vicinity, three dangers to navigation affecting charts 17302 (15th ed., May 20, 1989: NAD 83) and 17303 (6th ed., July 19, 1980: NAD 27) were found.

It is recommended that the enclosed Report of Dangers to Navigation be included in the Local Notice to Mariners.

Questions concerning this report should be directed to the Pacific Hydrographic Section at (206) 526-6853.

Sincerely,

ORIGINAL SIGNED BY

Pamela R. Chelgren-Koterba
Commander, NOAA
Chief, Pacific Hydrographic Section

Enclosure

cc: DMA/TC
N/CG221

REPORT OF DANGERS TO NAVIGATION

Hydrographic Survey Registry Number: H-10316
Survey Title: State: Alaska
Locality: Lisianski Inlet
Sublocality: Pelican Harbor and Vicinity
Project Number: S-0930-RA, NOAA Ship RAINIER

The following items were discovered during office processing of hydrographic survey H-10316.

Objects discovered: Two rocks and one soundings corrected to MLLW.

Affected nautical charts

<u>CHART</u> <u>NUMBER</u>	<u>EDITION</u>		<u>REPORTED</u> <u>DEPTH</u>	<u>CHARTED</u> <u>HORIZ</u> <u>DATUM</u>	<u>GEOGRAPHIC POSITION</u>	
	<u>NO.</u>	<u>DATE</u>			<u>LATITUDE (N)</u>	<u>LONGITUDE (W)</u>
17303	6th	7/19/80	RK cov 1.0 ft MLLW	NAD 27	57°56'39.58"	136°12'42.04"
17302	15th	5/20/89	RK cov 1.0 ft MLLW	NAD 83	57°56'38.19"	136°12'48.64"
17303	6th	7/19/80	RK uncov 4.0 ft MLLW	NAD 27	57°57'17.97"	136°13'38.92"
17303	6th	7/19/80	0.4 Fm	NAD 27	57°57'20.46"	136°13'38.20"

Questions concerning this report should be directed to the Pacific Hydrographic Section at (206) 526-6853.

[illegible]

RESPONSIBLE PERSONNEL		ORIGINATOR	
TYPE OF ACTION	NAME	<input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)	
OBJECTS INSPECTED FROM SEAWARD	Captain John J. Albright, NOAA		
POSITIONS DETERMINED AND/OR VERIFIED	ENS K.L. Schoonover, NOAA & LT T.A. Nichel, NOAA	FIELD ACTIVITY REPRESENTATIVE	
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		<input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE	
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64)			
OFFICE I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75		FIELD (Cont'd) B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982	
FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field Identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75 *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.		II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.	

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	ENS Karen L. Schoonover, NOAA
POSITIONS DETERMINED AND/OR VERIFIED	LT Thomas A. Nichel, NOAA
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>ORIGINATOR</p> <p><input type="checkbox"/> PHOTO FIELD PARTY</p> <p><input checked="" type="checkbox"/> HYDROGRAPHIC PARTY</p> <p><input type="checkbox"/> GEODETIC PARTY</p> <p><input type="checkbox"/> OTHER (Specify)</p> <p>FIELD ACTIVITY REPRESENTATIVE</p> <p>OFFICE ACTIVITY REPRESENTATIVE</p> <p><input type="checkbox"/> REVIEWER</p> <p><input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE</p> </div> <div style="width: 50%;"> <p>INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'</p> <p>(Consult Photogrammetric Instructions No. 64,</p> </div> </div>	
<div style="display: flex;"> <div style="width: 45%;"> <p>OFFICE</p> <p>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</p> <p>Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.</p> <p>EXAMPLE: 75E(C)6042 8-12-75</p> <p>FIELD</p> <p>I. NEW POSITION DETERMINED OR VERIFIED</p> <p>Enter the applicable data by symbols as follows:</p> <p>F - Field P - Photogrammetric</p> <p>L - Located Vis - Visually</p> <p>V - Verified 5 - Field identified</p> <p>1 - Triangulation 6 - Theodolite</p> <p>2 - Traverse 7 - Planetable</p> <p>3 - Intersection 8 - Sextant</p> <p>4 - Resection</p> <p>A. Field positions* require entry of method of location and date of field work.</p> <p>EXAMPLE: F-2-6-L 8-12-75</p> <p>*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.</p> </div> <div style="width: 50%;"> <p>FIELD (Cont'd)</p> <p>B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.</p> <p>EXAMPLE: P-8-V 8-12-75 74L(C)2982</p> <p>II. TRIANGULATION STATION RECOVERED</p> <p>When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.</p> <p>EXAMPLE: Triang. Rec. 8-12-75</p> <p>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</p> <p>Enter 'V-Vis.' and date.</p> <p>EXAMPLE: V-Vis. 8-12-75</p> <p>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</p> </div> </div>	

NOAA FORM 76-40 (8-74) Replaces C&GS Form 567.										U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION									
NONFLOATING AIDS OR BOUNDARY MARKS FOR CHARTS										ORIGINATING ACTIVITY									
TO BE CHARTED <input type="checkbox"/>		TO BE REVISED <input checked="" type="checkbox"/>		TO BE DELETED <input type="checkbox"/>		REPORTING UNIT (Field Party, Ship or Office)		STATE		LOCALITY		DATE		<input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> COMPILATION ACTIVITY <input type="checkbox"/> FINAL REVIEWER <input type="checkbox"/> QUALITY CONTROL & REVIEW GRP. <input type="checkbox"/> COAST PILOT BRANCH (See reverse for responsible personnel)					
OPR PROJECT NO.		HAVE <input type="checkbox"/> HAVE NOT <input type="checkbox"/>		JOB NUMBER		SURVEY NUMBER		DATUM		METHOD AND DATE OF LOCATION (See instructions on reverse side)		CHARTS AFFECTED							
S-0930-RA		N/A		H-10316		NAD 27 and NAD 83		POSITION		OFFICE		FIELD							
CHARTING NAME		DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)		LATITUDE ° / ' / ''		LONGITUDE ° / ' / ''		D.P. Meters		D.P. Meters									
Pelican Entrance Lt. (LL#24315)	NR on skeleton tower, Height 20 ft. Fl W 4 Sec. (PELICAN ENTRANCE LIGHT 1989)	57 57	22.051	682.24	136 13	41.285	678.97					F-2-6-L 10-12-89	17303 (NAD 27)						
		57 57	20.750		136 13	47.878							17302 (NAD 83)						
		57 57	20.779		136 13	47.937							17300 (NAD 83)						
NOTE: Positions listed above for Charts 17302 and 17300 differ due to differing latitude and longitude shifts published on the two charts.																			
17-92																			

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	ENS Karen L. Schoonover, NOAA
POSITIONS DETERMINED AND/OR VERIFIED	LT Thomas A. Nichel, NOAA
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	<div> <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETTIC PARTY <input type="checkbox"/> OTHER (Specify) </div> <div>FIELD ACTIVITY REPRESENTATIVE</div> <div>OFFICE ACTIVITY REPRESENTATIVE</div> <div> <input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE </div>
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)	
OFFICE I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	FIELD (Cont'd) B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982
FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field Identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75 *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

Approval Sheet

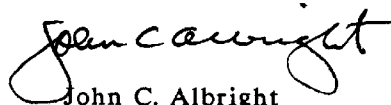
for

H-10316

RA-5-1-89

Standard procedures were followed in accordance with the Hydrographic Manual, Fourth Edition; the Hydrographic Survey Guidelines; and the Field Procedures Manual in producing this survey. The data were examined daily during data acquisition and processing.

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



John C. Albright
Captain, NOAA
Commanding Officer

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

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: January 3, 1990

MARINE CENTER: Pacific

OPR: S-0930-RA

HYDROGRAPHIC SHEET: H-10316

LOCALITY: Pelican Harbor & Vicinity, Lisianski Inlet, AK.

TIME PERIOD: October 10 - 15, 1989

TIDE STATION USED: 945-2611 Pelican Harbor, AK.

PLANE OF REFERENCE (MEAN LOWER LOW WATER): = 9.22 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: = 9.3 ft.

REMARKS: RECOMMENDED ZONING Zone direct on Pelican Harbor, AK.

*NOTE: The data for this project was tabulated on Greenwich Mean Time.



CHIEF, TIDAL DATUM QUALITY
ASSURANCE SECTION

H-10316

GEOGRAPHIC NAMES

Name on Survey
ALASKA, LIANSKI INLET
PELICAN HARBOR AND
VICINITY

	A	B	C	D	E	F	G	H	K
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	GRAND MCNALLY ATLAS	U.S. LIGHT LIST	
ALASKA (TITLE)	X								1
CHICHAGOF ISLAND	X								2
LISIANSKI INLET	X								3
PELICAN	X								4
PELICAN CREEK	X								5
									6
									7
									8
									9
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									25

Approved:

Charles E. Harrington
Chief Geographer - N/CG2x5

MAR 21 1990

NOAA FORM 77-27(H) (9-83)		U.S. DEPARTMENT OF COMMERCE		REGISTRY NUMBER H-10316	
HYDROGRAPHIC SURVEY STATISTICS					
RECORDS ACCOMPANYING SURVEY: To be completed when survey is processed.					
RECORD DESCRIPTION		AMOUNT		RECORD DESCRIPTION	
SMOOTH SHEET		1		SMOOTH OVERLAYS: POS., ARC, EXCESS	
DESCRIPTIVE REPORT		1		FIELD SHEETS AND OTHER OVERLAYS	
DESCRIP- TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR- GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS
ACCORDION FILES	1				
ENVELOPES					
VOLUMES	1				
CAHIERS					
BOXES					
SHORELINE DATA					
SHORELINE MAPS (List):					
PHOTOBATHYMETRIC MAPS (List):					
NOTES TO THE HYDROGRAPHER (List):					
SPECIAL REPORTS (List):					
NAUTICAL CHARTS (List):					
OFFICE PROCESSING ACTIVITIES <i>The following statistics will be submitted with the cartographer's report on the survey</i>					
PROCESSING ACTIVITY				AMOUNTS	
				VERIFICATION	EVALUATION
				TOTALS	
POSITIONS ON SHEET					
				1103	
POSITIONS REVISED					
SOUNDINGS REVISED					
CONTROL STATIONS REVISED					
				TIME-HOURS	
				VERIFICATION	EVALUATION
				TOTALS	
PRE-PROCESSING EXAMINATION					
VERIFICATION OF CONTROL					
VERIFICATION OF POSITIONS				116	116
VERIFICATION OF SOUNDINGS				199	199
VERIFICATION OF JUNCTIONS					
APPLICATION OF PHOTOBATHYMETRY					
SHORELINE APPLICATION/VERIFICATION					
COMPILATION OF SMOOTH SHEET				62	62
COMPARISON WITH PRIOR SURVEYS AND CHARTS					4
EVALUATION OF SIDE SCAN SONAR RECORDS					
EVALUATION OF WIRE DRAGS AND SWEEPS					
EVALUATION REPORT					28
GEOGRAPHIC NAMES					
OTHER*					
*USE OTHER SIDE OF FORM FOR REMARKS			TOTALS	377	32
				409	
Pre-processing Examination by <u>J.L. Stringham</u>				Beginning Date 10-11-89	Ending Date 10-15-89
Verification of Field Data by <u>R.A. Shipley</u>				Time (Hours) 377	Ending Date 7-25-90
Verification Check by <u>J.L. Stringham</u>				Time (Hours) 20	Ending Date 7-25-90
Evaluation and Analysis by <u>C.R. Davies</u>				Time (Hours) 32	Ending Date 8-15-90
Inspection by <u>D.Hill</u>				Time (Hours) 8	Ending Date 8-24-90

EVALUATION REPORT
H-10316

1. INTRODUCTION

Survey H-10316 is a navigable area hydrographic survey accomplished by the NOAA Ship RAINIER under Project Instructions S-0930-RA, dated September 26, 1989.

This survey occurred in Alaska and covers Pelican Harbor and an area which extends one nautical mile south along the eastern shore of Lisianski Inlet. This survey was conducted to verify the existence of a reported submerged rock at the entrance to Pelican Harbor in an area charted as 10 fathoms. The surveyed area extends from latitude 57°56'12"N to latitude 57°57'39"N and from longitude 136°14'18"W to longitude 136°11'27"W. The surveyed area includes marinas and wharfs in Pelican Harbor and mud flats near Pelican Creek. Offshore of the eastern shore of Lisianski Inlet the area consists of islands, reefs and offshore rocks. The bottom consists of mud, sand, pebbles and shells. Depths range from zero to 83 fathoms.

Predicted tides for Sitka, Alaska, were used for the reduction of soundings during field processing. Approved hourly heights zoned from Pelican Harbor, Alaska, gage 945-2611, 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. The TRA and sound velocity correctors are adequate. An accompanying computer printout contains the parameters and the correctors. The electronic control correctors have been determined according to the established procedures and are adequate.

A digital file has been generated for this survey as required by the specifications contained in Hydrographic Survey Guideline No. 52, Standard Digital Data Exchange Format, April 15, 1986. The file, however, is incomplete. Certain feature descriptive information, all line type data and miscellaneous isolated features are not in the digital record due to the present lack of digitizing resources. The user should refer to the smooth sheet for complete depiction of survey data.

2. CONTROL AND SHORELINE

Sections F and G of the hydrographer's report and the Horizontal and Electronic Control Reports for S-0930-RA,

1989, contain adequate discussions of horizontal control and hydrographic positioning.

Positions of horizontal control stations used during hydrography are 1989 field and published values 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 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: 1.386 seconds (42.9 meters)
Longitude: -6.598 seconds (-108.6 meters)

The year of establishment of control stations shown on the smooth sheet originates with published values and this survey.

The quality of several positions exceeds limits in terms of error circle radius and residual. A review of the data, however, indicates that none of these fixes are used to position dangers to navigation. The features or soundings located by these fixes are consistent with surroundings. These fixes are considered acceptable.

Shoreline depicted on the smooth sheet in brown originates with an enlargement of cartographic revision print CRS 002389 and is to be used for orientation only.

The following shoreline changes are depicted in dashed red on the smooth sheet and are supported with comments in the raw records and the final field sheet.

<u>Feature</u>	<u>Latitude(N)</u>	<u>Longitude(W)</u>
HWL from	57°57'24"	136°13'06"
to	57°56'31.5"	136°11'31"
HWL	57°57'12"	136°13'27"
HWL	57°57'10"	136°13'16"
HWL	57°57'08"	136°13'09"
HWL	57°57'06"	136°13'03"
HWL	57°56'36"	136°12'39"

The following positions were acquired by the hydrographer as "see field sheet" fixes (SFS). These fixes were manually transferred from the final field sheet.

<u>Position Numbers</u>	<u>Latitude(N)</u>	<u>Longitude(W)</u>
1 - 46	57°57'34"	136°13'34"
1 - 19	57°57'09"	136°13'06"

Notable within this group of data are the four dolphins at the following positions.

<u>Latitude(N)</u>	<u>Longitude(W)</u>
57°57'29.5"	136°13'32.6"
57°57'28.2"	136°13'34.4"
57°57'28.9"	136°13'36.1"
57°57'28.8"	136°13'33.6"

These dolphins (AWOIS 51773) were observed during the survey, however, the documentation of positioning methods and results is deficient. Although the hydrographer states in section H that each dolphin was located with an angle and distance there is no substantiating documentation. The only documentation of geographic positioning consists of a Contact File listing which was used during office processing to locate the dolphins on the smooth sheet. See section 7 of this report for charting recommendation.

In addition, 19 soundings adjacent to the north shore of the small island centered at latitude 57°57'09"N, longitude 136°13'06"W, were apparently acquired without control. Their location and that of respective depth curves is considered to be approximate. Due to inadequate recording of raw data, including time of hydrography, these soundings are assumed to have been reduced to MLLW using predicted tides as stated by the hydrographer. This group of soundings is contained within the area defined by latitude 59°57'12"N, longitude 136°13'07"W, latitude 57°57'08"N, longitude 136°12'58"W, latitude 57°57'06"N, longitude 136°13'03"W, and latitude 57°57'10"N, longitude 136°13'10"W.

The submerged pipeline ending at latitude 57°57'22.5"N, longitude 136°13'45.5"W, was transferred to the smooth sheet from the final field sheet without supporting positional information and without specific information documenting actual observation of the pipeline by the hydrographer. A review of field records, however, disclosed drawings provided by an engineering firm which purport to define the location of the pipeline as built. It is assumed that the pipeline exists as depicted.

The above features and shoreline are adequate to supersede the chart. However, there is a need to update the shoreline maps in this area through up-to-date photography.

3. HYDROGRAPHY

With the exceptions noted in this report, hydrography is adequate to:

- a. delineate the bottom configuration, determine least depths, and draw the standard depth curves;
- b. reveal there are no significant discrepancies or anomalies requiring further investigation; and

c. show the survey was properly controlled and soundings are correctly plotted.

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 Field Procedures Manual, except as follows.

A "holiday" exists at latitude 57°57'19"N, longitude 136°13'30"W.

All See Field Sheet, "SFS", hydrography should be recorded with position numbers, day numbers and time, so the soundings can be reduced for observed tides.

The survey contains multiple duplicated position numbers. Duplicated positions cause significant confusion when interpreting survey records.

5. JUNCTIONS

There are no contemporary surveys which junction survey H-10316. A comparison with charted depths reveals good agreement in the common areas.

6. COMPARISON WITH PRIOR SURVEYS

H-4003(1917) 1:20,000

Survey H-4003 covers the entire area of the present survey. Considerable amount of cultural development, piers, wharfs and marinas, have been built in Pelican Harbor since the prior survey was accomplished. Soundings generally agree within 3 fathoms although survey H-10316 has greater sounding density therefore greater detail. Some discrepancies between the two surveys were noted, however, and are discussed in section K of the hydrographer's report.

There are no AWOIS items originating from survey H-4003 applicable to the present survey.

Survey H-10316 is adequate to supersede the prior survey within the common area.

7. COMPARISON WITH CHART

Chart 17303, 6th edition, dated July 19, 1980; scale 1:40,000 (with 1:10,000 inset of Pelican Harbor)

Chart 17302, 15th edition, dated May 20, 1989; scale 1:80,000

Chart 17300, 25th edition, dated April 29, 1989; scale 1:209,978

a. Hydrography

Charted hydrography originates with survey H-4003 and miscellaneous sources.

Although the charted soundings generally agree to within 3 fathoms, several uncharted shoals have been identified. The existence of the reported submerged rock was confirmed by a 1.7-fathom rock and a 2.7-fathom sounding in the area charted at about 10 fathoms. See discussion of AWOIS Item 51772 in section L of the hydrographer's report. The most significant additional shoals have been reported to the Coast Guard and DMA as dangers to navigation. Copies of the letters are attached.

AWOIS Item 51773 consists of three dolphins charted in the vicinity of latitude 57°57'28"N, longitude 136°13'36"W (NAD27). The hydrographic investigation of these dolphins is poorly documented, however, it is assumed, based on the description of the investigation contained in sections H and L of the hydrographer's report, that the survey data is sufficient to supersede the charted data. The three charted dolphins should be deleted from the chart and four dolphins should be charted as depicted on the smooth sheet.

The HWL is significantly different than is charted. It is recommended that the charts be revised from the chart revision survey CRS 002389 and from hydrographic revisions originating with the present survey.

Survey H-10316 is adequate to supersede charted hydrography within the common area.

b. AWOIS

The following AWOIS items originate with miscellaneous sources: 51772 and 51773. Refer to section L of the hydrographer's report and section 7.a. of this report for the disposition of the two items.

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 aids located within the area of this survey. There is one fixed aid located within the survey area, Pelican Entrance Light at latitude 57°57'22.051"N, longitude 136°13'41.285"W, light list number 24315. This aid was adequately located and serves its intended purpose.

e. Geographic Names

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

f. Dangers to Navigation


The hydrographer reported one shoal and three submerged rocks to the USCG, DMAHTC and N/CG221. Three additional dangers were discovered during office processing and reported to the Coast Guard, DMAHTC and N/CG221. Copies of the reports are attached.

8. COMPLIANCE WITH INSTRUCTIONS

Survey H-10316 adequately complies with the Project Instructions except where noted in section 4 of this report.

9. ADDITIONAL FIELD WORK

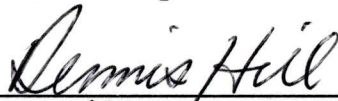
This is a adequate hydrographic survey. Assuming a modern photogrammetric survey of the shoreline can be accomplished no additional field work is recommended.


Charles R. Davies
Cartographer

APPROVAL SHEET
H-10316

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, cartographic symbolization, comparison with prior surveys and verification or disproval of charted data. The digital data have been completed and all revisions and processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts have been made and are included with the survey records. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.



Date: 8-24-90

Dennis J. Hill
Chief, Hydrographic Processing Unit
Pacific Hydrographic Section

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



Date: 8/29/90

Commander Pamela Chelgren-Koterba, NOAA
Chief, Pacific Hydrographic Section

Final Approval

Approved:



Date: 9/25/90

Wesley V. Hull
Rear Admiral, NOAA
Director, Charting and Geodetic Services

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Washington, D.C.

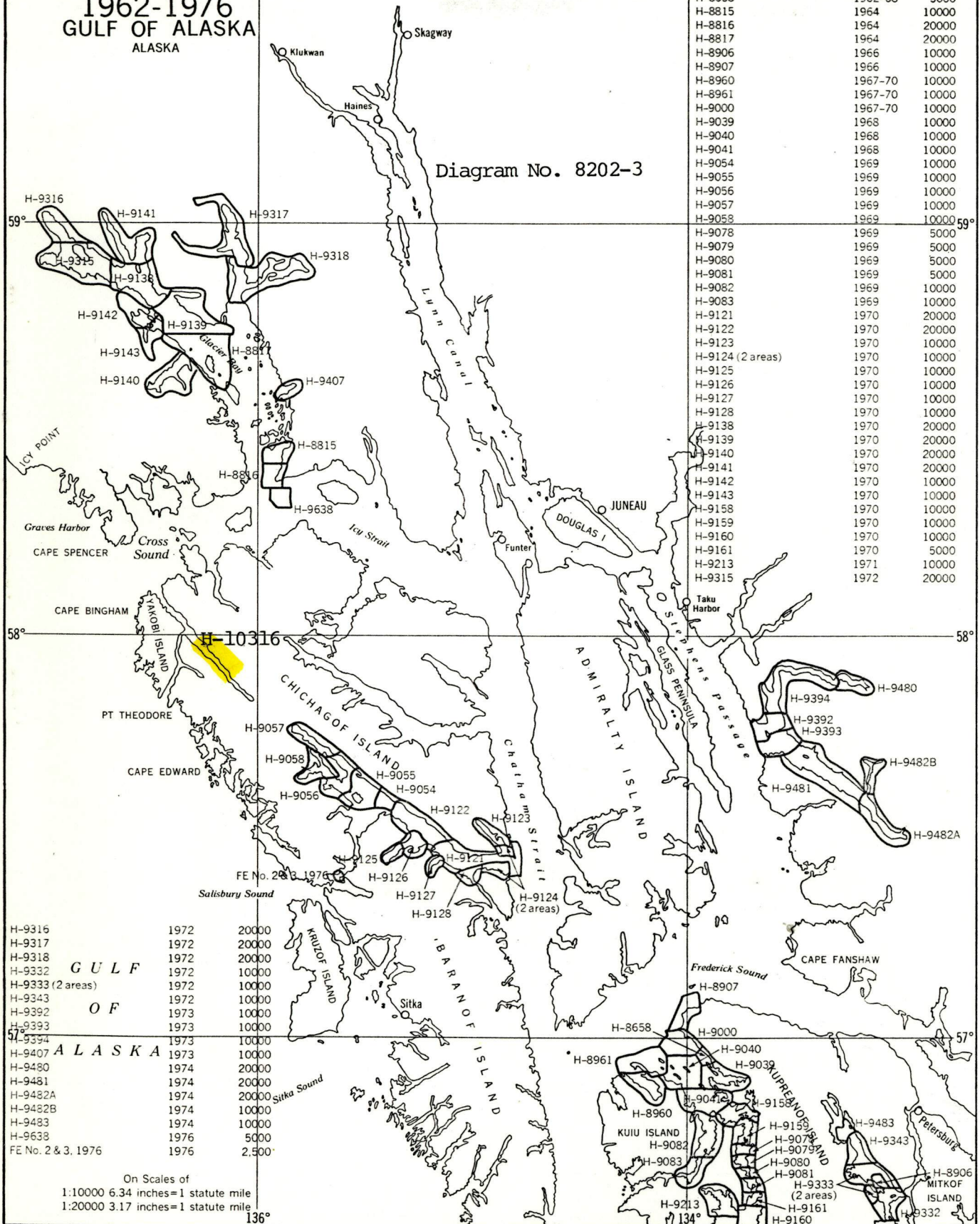
Hydrographic Index No. 111E

INDEX
HYDROGRAPHIC SURVEYS
Complete through March 1979
1962-1976
GULF OF ALASKA
ALASKA

Diagram No. 8202-3

HYDROGRAPHIC SURVEYS

No.	Date	Scale
H-8658	1962-68	5000
H-8815	1964	10000
H-8816	1964	20000
H-8817	1964	20000
H-8906	1966	10000
H-8907	1966	10000
H-8960	1967-70	10000
H-8961	1967-70	10000
H-9000	1967-70	10000
H-9039	1968	10000
H-9040	1968	10000
H-9041	1968	10000
H-9054	1969	10000
H-9055	1969	10000
H-9056	1969	10000
H-9057	1969	10000
H-9058	1969	10000
H-9078	1969	5000
H-9079	1969	5000
H-9080	1969	5000
H-9081	1969	5000
H-9082	1969	10000
H-9083	1969	10000
H-9121	1970	20000
H-9122	1970	20000
H-9123	1970	10000
H-9124 (2 areas)	1970	10000
H-9125	1970	10000
H-9126	1970	10000
H-9127	1970	10000
H-9128	1970	10000
H-9138	1970	20000
H-9139	1970	20000
H-9140	1970	20000
H-9141	1970	20000
H-9142	1970	10000
H-9143	1970	10000
H-9158	1970	10000
H-9159	1970	10000
H-9160	1970	10000
H-9161	1970	5000
H-9213	1971	10000
H-9315	1972	20000



H-9316	1972	20000
H-9317	1972	20000
H-9318	1972	20000
H-9332	1972	10000
H-9333 (2 areas)	1972	10000
H-9343	1972	10000
H-9392	1973	10000
H-9393	1973	10000
H-9394	1973	10000
H-9407	1973	10000
H-9480	1974	20000
H-9481	1974	20000
H-9482A	1974	20000
H-9482B	1974	10000
H-9483	1974	10000
H-9638	1976	5000
FE No. 2 & 3, 1976	1976	2,500

On Scales of
1:10000 6.34 inches=1 statute mile
1:20000 3.17 inches=1 statute mile

(see also No. 110)

A-5324

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10316

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.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10316

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

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3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

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