

9957

Diagram No. 8556-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic
Field No. DA-10-2-81
Office No. H-9957

LOCALITY

State Alaska
General Locality Afognak Island
Locality Kazakof Bay

19 81

CHIEF OF PARTY
CDR N.C. Austin

LIBRARY & ARCHIVES

DATE February 17, 1984

☆U.S. GOV. PRINTING OFFICE: 1980-766-230

AREA 6
CHARTS

16594 } to sign of me
16580 } R. Austin application

9957
8556

HYDROGRAPHIC TITLE SHEET

H-9957

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.

DA-10-2-81

State Alaska

General locality Afognak Island

Locality Kazakof Bay

Scale 1:10,000 Date of survey July 21 - Sept. 3, 1981

Instructions dated February 6, 1981 Project No. OPR-P146-DA,FA-81

Vessel NOAA Ship DAVIDSON, Launches 3131, 3132 and Skiff 3133

Chief of party CDR Ned C. Austin

Surveyed by LT D. Dreves, LTJG N. Bogue, LTJG S. Konrad, LTJG D. Actor

Soundings taken by echo sounder, hand lead, pole Ross Finline, Model 5000 & Leadline

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Verification

~~Recorded~~ by Richard A. Shipley Automated plot by PMC Xynetics Plotter

Evaluation

~~Work done~~ by Gordon E. Kay

Soundings in fathoms ~~feet~~ at MLLW

REMARKS: Revisions and marginal notes in black were made by the Evaluator.

ADDIS 3/6/84 MGT

*STANDARDS CK'D 2-17-84
C. LOY*

153°15'

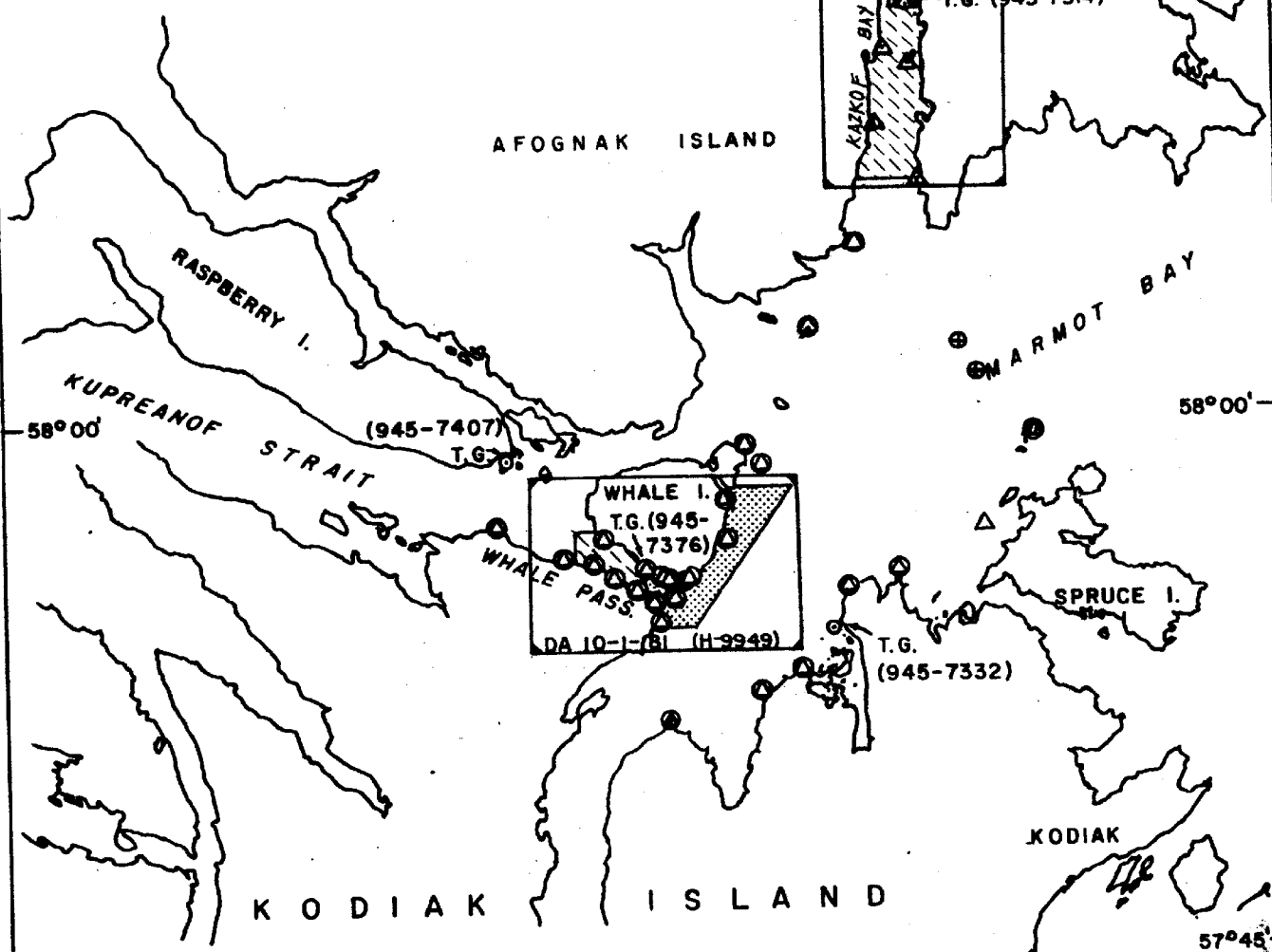
152°30'

PROGRESS SKETCH
OPR-PI46-DA-81
SHELIKOF STRAIT, ALASKA
MARMOT BAY

SCALE: CHART 16580
 NOAA SHIP DAVIDSON (S-331)
 CDR N C AUSTIN, Comdg.

58°15'

58°15'



58°00'

58°00'

57°45'

57°45'

JUNE	JULY	AUG	SEPT	STATISTICS
121.15	353.65	9.0		L. N. M. SOUNDING LINE
5.5	10	0.2		SO. N. M. SOUNDING
21	7	0		TRIANGULATION STA. RECOVERED
1	5	0		TRIANGULATION STA. ESTABLISHED
4	0	0		TIDE GAGE
29	71	3		BOTTOM SAMPLES
0/0	0/2	0		MARTEK/NANSEN CAST/ X.S.T.D.
7/19	0/0	0		BENCH MARKS RECOVERED/ESTAB.
24	32	0		L.N.M. FIELD EDIT OF SHORELINE

153°15'

153°00'

152°45'

152°30'

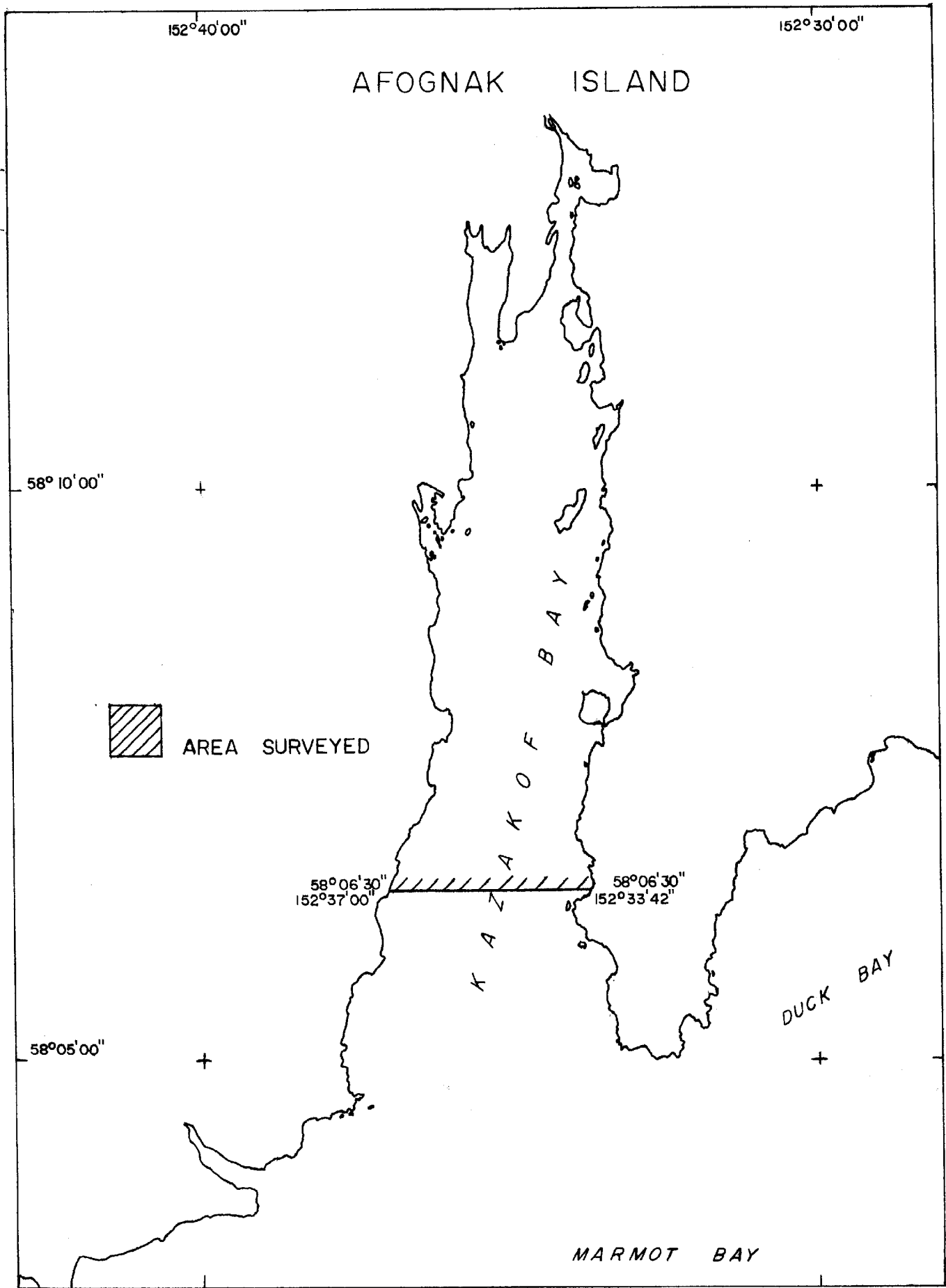


CHART NO. 16594

SCALE 1:78,900

DESCRIPTIVE REPORT
TO ACCOMPANY
H-9957 DA 10-2-81
1:10000 1981

A. PROJECT

This survey was conducted in accordance with project instructions OPR-P146-DA,FA - 81, dated 6 February 1981, and amended by change No. 1, dated 15 April 1981, and change No. 2, dated 6 May 1981. ✓

B. AREA SURVEYED

The area surveyed, Kazakof Bay, is on the south side of Afognak Island, and extends northward from Marmot Bay approximately seven nautical miles. It is an area of rocky coastline, heavily wooded near the shore.

The survey area is the portion of Kazakof Bay north of latitude 58°06'30"N.

Survey operations began July 21, 1981 (J.D. ²⁰²~~246~~). ✓

C. SOUNDING VESSEL

Listed below are the vessels used to obtain soundings on this survey, ~~their electronic data processing~~ ^{Position} (~~EDP~~) numbers, and the color code used in data recording and preliminary plotting.

<u>Vessel</u>	<u>EDP Number</u>	<u>Color Code</u>
DAVIDSON *	3130	Black
Launch DA-1	3131	Red
Launch DA-2	3132	Blue
Skiff WZ 3041	3133	Green

 ✓

* DAVIDSON used for bottom samples only.

Skiff WZ 3041 was equipped with a Raytheon portable echo sounder mounted on a bracket installed on the skiff for that purpose. This configuration was used

successfully in shallow areas. No other unusual sounding vessel configurations were used. No problems were encountered. ✓

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Listed below are the types and serial numbers of all echo sounding instruments used by each survey vessel.

<u>Vessel</u>	<u>Type</u>	<u>Component</u>	<u>S/N</u>
DA-1	Ross Model 5000	Recorder	1048
		Transceiver	1081
		Digitizer	1081
DA2	Ross Model 5000	Recorder	1080
		Transceiver	1077
		Digitizer	1048
Skiff WZ 3041	Raytheon DE-719	N/A	6168

The Ross fathometers were operated successfully in the fathom mode in depths from 1 fathom to 75 fathoms. Phase calibrations were made at 10 fathom intervals from 0 to at least 100 fathoms prior to each day's hydrography. The fathogram initial was maintained at zero as required during survey operations. ✓

The Raytheon fathometer was operated successfully in depths from 1 foot to 30 feet. The speed of sound was assumed to be 4800 ft/sec and the stylus drive motor speed adjusted accordingly using the 50-ft chart "calibrate" line. ✓

The fathogram initial was maintained at zero as required during survey operations. ✓

Soundings on the final field sheet have been corrected for transducer draft. Bar checks were made daily on the launches and a TRA of +0.3 fathoms was determined. This was applied to all soundings obtained by the launches. Bar checks were made on the skiff (3133) on J.D. 207 and 208 to determine the transducer draft of the ✓

DE-719 portable fathometer when mounted in its bracket on the side of the skiff. A TRA of +2.0 feet was determined. This was confirmed by direct measurement and was checked by measurement or comparison with pole soundings thereafter; a TRA of +2.0 feet was applied to all soundings obtained by the skiff (3133). ✓

No velocity corrections have been applied to the soundings on the final field sheet. The DAVIDSON (3130) conducted one Nansen Cast during the project, on 30 July 1981 (J.D. 211), in the vicinity of latitude $58^{\circ}01'48''N$ and longitude $151^{\circ}31'54''W$. Details are given in the Corrections to Echo Soundings Report. ✓

Corrections for settlement and squat were not applied to soundings on the final field sheet. They were determined to be 0.1 fathom or less at speeds used during this survey, and were not considered significant. Details are given in the Corrections to Echo Soundings Report. ✓

Soundings on the final field sheet have been corrected for predicted tides. Predicted tide correctors were computed from daily predicted tides for Kodiak, Alaska, corrected to Kazakof Bay, Alaska, station 1755 in the 1981 Tide Tables. All times were converted to Greenwich Mean Time and the predicted tide correctors were computed at 0.2 fathom intervals. ✓

Two tide stations were occupied to provide tide data for this survey, Kizhuyak Pt. (945-7322) and Kazakof Bay (945-7314). These gages remained in operation throughout the survey. Details may be found in the Field Tide Note. ✓

E. HYDROGRAPHIC SHEETS

Field sheets were prepared using the DAVIDSON's PDP 8/e computer, a Houston instrument DP-3 plotter, and program RK-201. ✓

The survey consists of one 1:10,000 scale computer sheet, DA 10-2-81, and five 1:5,000 scale insets. The insets are delineated by dashed lines on DA 10-2-81. ✓

Listings of projections and electronic control parameters are appended to this report. All field records will be sent to the Pacific Marine Center for verification and smooth plotting. ✓

F. CONTROL STATIONS

Two third-order triangulation stations were recovered and four third-order triangulation stations were established to control hydrography during this survey. One of the third-order stations established was a temporary station. In addition, three temporary stations were located using less than third order methods to control hydrography in two shallow, featureless areas not visible from third-order stations in accordance with Section 3.1.3.5. of the Hydrographic Manual, Fourth Edition. The North American Datum of 1927 was used during all survey operations. ✓

The control stations used for this survey are listed below.

<u>Station</u>	<u>Signal No.</u>	<u>Remarks</u>
NUB, 1909 — 1971*	030	Existing third-order control
KAZAKOF, 1971	033	
ZODIAK, 1981	035	Newley established third-order control
PICO, 1981 (Temp.)	031	
DEER, 1981	034	✓
DEER, 1981 Eccentric (Temp)	036	
CHICK, 1981	032	
DOC, 1981 (Temp)	041	Less than third-order control. Temporary stations, only.
ISLET, 1981 (Temp)	042	
PASS POINT, 1981 (Temp)	043	

* NUB, 1933-~~1971~~ does not appear on the final field sheet; it is located to the south of the southern limit of DA 10-2-81.

Positions for stations ZODIAK, PICO, DEER, AND CHICK were computed by the most direct traverse available from NUB. Check angles were obtained from NUB to start the traverse. Second-order observing techniques were used at these stations. Triangle closure and side checks were used to ensure required accuracy was obtained. Details may be found in the Horizontal Control Report. ✓

The position used for KAZAKOF, 1971 was the mean of three positions computed from different traverse paths from NUB, 1909 - 1971. This position differed from the published position by 0.386 meters. The new position was used for all smooth plotting, hence the station is shown on the final field sheet as KAZAKOF, 1971 - 1981. ✓

Station PICO was not monumented and should be considered a temporary station. The only site available in that particular area which satisfied both geodetic and hydrographic visibility requirements was on a large boulder. The immediate stability of the boulder was not in doubt but it was not considered to be stable over the lifetime of a survey disk. The station is marked by a cross chiseled in the head of a bolt set in a drill hole in the boulder. ✓

Station DEER, 1981 ECCENTRIC was required to control hydrography to the northwest of station DEER. Position determination for DEER, 1981 ECCENTRIC was by horizontal direction, measured by observing two positions on a Wild T-2 theodolite, and taped distance from DEER, 1981. The eccentric was not monumented and is not recoverable. ✓

Station DOC, 1981 (Temp.) was required for range-azimuth control of hydrography at the head of the cove on the eastern side of Kazakof Bay. It was located on an earthen wharf at the logging camp which operates in the cove. Range-azimuth positions for the two outer corners of the wharf were obtained on J.D. 208 by launch 3132 (position nos. 5394, 5395) and on J.D. 223 by skiff 3133 (position nos. 7369, 7370). From these, mean positions were computed for the outer corners of the wharf. DOC, 1981 (Temp.) was established on the outer edge of the wharf and located by taping distances from each outer corner of the wharf. Positions were computed for DOC, 1981 (Temp) by direct computations from each corner of the wharf, using the azimuth computed between the outer corners of the wharf and the taped distances. These positions were meaned to obtain a final position for ✓

Data and computations are included with the Horizontal Control Report.

ISLET; ~~1981 (Temp.)~~ was required for range-azimuth control of hydrography in shallow areas of the eastern arm of the head of Kazakof Bay. The station was the north end of a photo-identifiable islet. A position was determined by radial line intersection technique on TP-00297 (1:20,000 scale) using photographs no. 6149 and 6150. ✓

PASS POINT, ~~1981 (Temp.)~~ was used as an initial pointing object for range-azimuth hydrography in shallow areas of the eastern arm of the head of Kazakof Bay. The station was used as a pass point in the production of TP-00297 and was indicated on the manuscript. ✓

Geographic positions for stations ISLET, 1981 (Temp.) and PASS POINT, ~~1981 (Temp.)~~ were scaled from TP-00297 (1:20,000) and are approximate positions. The PMC Photogrammetry Division should determine positions for these stations by photogrammetric methods prior to smooth plotting at PMC. *See James Messers letter (Photogrammetry Station Chief) of April 21, 1982 at end of report* ✓

Details, computations, and further information are contained in the Horizontal Control Report, Electronic Control Report and the appended signal list. ✓

G. HYDROGRAPHIC POSITION CONTROL

Sounding line position control was obtained by using the Motorola Miniranger III system in range-range and range-azimuth modes. In small bays where line-of-sight to control stations was lost, position control was obtained by dead reckoning between photo-identifiable points. These areas constitute a small part of the survey and will be discussed in detail. ✓

Serial number of Miniranger III components used in the survey vessels during this survey are listed below.

<u>Vessel</u>	<u>Console</u>	<u>R-T</u>	<u>Julian Days</u>
3130	707	719	210
3131	710	721	204 - 206
			210 - 211
			223 - 224
3131	707	719	214
3132	716	709	202 - 209
			222, 224-245
3133	707	719	207, 222-223

 ✓

<u>Vessel</u>	<u>Console</u>	<u>R-T</u>	<u>Julian Days</u>
3133	710	721	244 - 246

Miniranger III shore stations were chosen to maintain line-of-sight with the sounding vessels, and while in range-range mode, to achieve arc intersection greater than 30°. The transponder codes, serial numbers, and days of the operation of shore stations are listed below.

<u>Station</u>	<u>Code (S/N)</u>	<u>Days of Operation</u>
NUB, 1933 - 1971	3 (773)	202 - 211
ZODIAK, 1981	4 (771)	202 - 211
	5 (911711)	222 - 243
PICO, 1981 (Temp.)	5 (911711)	202 - 211
	2 (772)	222 - 243
CHICK, 1981	6 (911723)	202 - 211
	3 (773)	222 - 246
DEER, 1981	2 (772)	202 - 211
		244 - 246
	4 (771)	222 - 243
KAZAKOF, 1971	1 (723)	202 - 211
	4 (771)	224 - 246
DEER, 1981 ECC.		
(Temp.)	2 (772)	209 - 210
DOC, 1981 (Temp.)	5 (911711)	244
ISLET, 1981		
(Temp.)	5 (911711)	244 - 246

Standard baseline calibrations were conducted on 6 July 1981 (J.D. 187), 30 July 1981 (J.D. 211), and 5 September 1981 (J.D. 248), over measured baselines. Baseline correctors were determined on those days. Correctors applied to ranges on the final field sheet are the means of the baseline correctors determined on days which most closely bracket the time of hydrography, with an exception as mentioned below.

The console/R-T pair in launch 3132 (716/709) failed on J.D. 243. The magnetron was replaced in R-T 709 on J.D. 244 and the pair was used to control dive investigations on J.D. 245. The console/R-T pair failed to operate during the baseline calibration on J.D. 248, so the range data from this pair on J.D. 245 is not calibrated. Positions 5589-5593 are plotted using raw data. A system check performed on J.D. 245 indicated satisfactory performance, however.

Range data from console/R-T pair 716/709 obtained between J.D. 212 and J.D. 243 were plotted using baseline correctors from J.D. 211. *(Verification update of negative correctors)*

Miniranger III system checks were performed each day before and after hydrography, except as noted below. System checks were obtained by transiting the baseline between two shore stations. This was done by steering the launch or skiff along an arc of fixed range from one station (A) and noting the range from the other station (B). Baseline transit was marked by attaining a minimum on the range to station B or by an observer at one of the shore stations. The two ranges were recorded at baseline transit, summed, and compared with the known inverse distance between stations A and B. If this difference was within five meters of the sum of the baseline correctors for the Miniranger III console/R-T pair and shore stations involved, system performance was deemed acceptable. Three consistent observations were considered adequate for a system check. ✓

A system check was performed before and after range-azimuth hydrography from station DOC (Temp.) on J.D. 244. This system check was applied to range-azimuth hydrography from station ISLET (Temp.) on the same day, using the same code and R-T/console pair. A static Miniranger III system check was done on J.D. 245 - 246 before and after range-azimuth hydrography from ISLET (Temp.). The skiff was placed alongside station PASS POINT (Temp.) and the observed Miniranger distance to ISLET (Temp.) compared to the computed baseline distance. ✓

Details of Miniranger III system performance and calibration procedures are found in the Electronic Control Report.

Wild T-2 Theodolites were used to determine azimuths for range-azimuth control of hydrography. Pointings on an initial object were made before and after hydrography. The mean of these pointings was used for smooth plotting. Pointings were made on another object where possible to provide a check angle and back-up initial in case the original initial was lost. ✓

Position control was obtained in several remote shallow bays off the main body of Kazakof Bay by dead reckoning between photo-identifiable points. This technique was used only in areas where other control was not available, as described in paragraph 7, section 6.3.3, and paragraph 4, section 6.3.3.2., of the Hydrographic Manual, Fourth Edition. Geographic positions for the beginning and end of each sounding line were scaled from TP-00297 (1:20,000 scale.). Photographs were used to aid in identification of points. Dummy range-range positions were created from the scaled G.P.s. Soundings were ✓

plotted on the basis of time and course between the scaled G.P.s. The sounding lines controlled in this manner are listed below.

<u>Julian Day</u>	<u>Sounding Vessel</u>	<u>Position Numbers</u>
208	3133	7177 - 7188
209	3133	7190 - 7199
210	3132	5481 - 5499
222	3133	7274 - 7291

Details and computations are in the raw data cahier.

Line-of-sight to control stations was occasionally lost at the shoreward end of sounding lines. In these cases, sounding lines were extended to the shoreline. Sounding vessel course and speed was maintained to the inshore end of the line. Ranges and azimuths required for positioning were computed by linear extrapolation from at least three preceding positions. These computed ranges and azimuths are noted on the raw data print-outs. ✓

H. SHORELINE

Shoreline detail shown on the final field sheet is taken from the 1:20,000 scale class III manuscripts TP-00297 and TP-00303, enlarged to 1:10,000 scale. All shoreline on the final field sheet has been field edited; changes and corrections have been transferred to the field sheet and are shown in red. *See evaluator report section 2*

A rock surrounded by ledge is shown in red on the final field sheet at latitude 58°10'39"N and longitude 152°34'15"W. This feature was shown on TP-00297 as an island but was revised after consultation between the hydrographer and the field editor. *See evaluator report section 2*

Details and computations are found in the Field Edit Report and data for manuscripts TP-00297 and TP-00303. ✓

I. CROSSLINES

Crosslines totaled 9.5% of the principal sounding lines. Agreement with the mainscheme sounding lines was excellent. Two hundred and seven comparisons were made; 96% agreed within the criterion stated in Section 1.1.2., Part B.II.1., of the Hydrographic Manual. ✓

Crossline agreement was better than the stated criterion in the center of the bay where relatively flat bottom prevailed. The discrepancies generally exist in the crossline which runs north-south at longitude 152°34'12"W. That crossline runs parallel to the depth contours in an area where the depths ✓

drop from 20 fathoms to 50 fathoms. A horizontal displacement of $1\frac{1}{2}$ mm at the scale of the survey can account for a significant change in depth. This explains the discrepancies that exist in that area. Other discrepancies occur in areas of irregular or steeply sloping bottom.

J. JUNCTIONS

This survey does not junction with any prior or contemporary survey.

K. COMPARISON WITH PRIOR SURVEYS

Two presurvey review items lie within the limits of this survey. These non-numbered PSR items were indicated by dashed lines on NOS chart no. 16594, 1:78,900 scale, and are discussed below.

The southerly of the two items is a charted 10 fathom sounding at latitude $58^{\circ}07'42''N$ and longitude $152^{\circ}35'48''W$. This originates from a 64 - foot sounding at the same position on H-3014 (1:20,000 scale), the 1909 survey of Kazakof Bay, then called Danger Bay.

The area around the 10 - fathom sounding was first investigated by launch, Sounding lines were run over the area at 22 meter spacing to delineate the feature, as shown on inset No. 3 (1:5,000 scale). Next, a diver investigation was conducted, centered at the point of least depth found by the launch. Using circle search techniques, the divers located the least depth in the area. A float was sent to the surface on a taut line secured to the bottom at the least depth. The launch was placed alongside the float and range-range fix with check azimuth obtained. The depth was obtained by measuring the length of the taut line from the float at the surface to the point of attachment. Computations are contained in the raw data cahier. Results were as follows.

<u>J.D.</u>	<u>Position Number</u>	<u>G.P.</u>	<u>Least Depth</u>	<u>Description</u>
222	5514	$58^{\circ}07'41.87''N$ $152^{\circ}35'50.15''W$	7.6 fm	Knob on smooth, rocky bottom.

The least depth listed above should be charted in place of the 10 - fathom sounding currently charted.

The northerly of the two PSR items on DA 10-2-81 is a charted $7\frac{1}{2}$ - fathom sounding at latitude $58^{\circ}09'15''N$ and longitude $152^{\circ}35'35''W$. This originates with a 47 foot sounding at the same position on H-3014.

The area around the 7½ - fathom sounding was first investigated by launch. Sounding lines were run over the area at 22 meter spacing to delineate the feature, as shown on inset no. 4 (1:5,000 scale). Next, a diver investigation was conducted, using the same techniques as described above for the southern PSR item. Computations are contained in the raw data cahier. Results were as follows. ✓

<u>J.D.</u>	<u>Position Number</u>	<u>G.P.</u>	<u>Least Depth</u>	<u>Description</u>
222	5517	58°09'13.58" N 152°35' 35.01" W 34.91"	2.8 fm	High point on rocky ridge tending N-S. ✓

The least depth listed above should be charted in place of the 7½ fathom sounding currently charted. This feature was reported to the USCG as a danger to navigation. Copies of the radio message and letter are appended to this report. ✓

The only prior survey of Kazakof Bay is H-3014, 1:20,000 scale, done in 1909 when the bay was called Danger Bay. Agreement with soundings on DA 10-2-81 was good. Forty sounding comparisons were made; 85% satisfied the criterion stated in Section 1.1.2 Part B.II.1 of the Hydrographic Manual. The discrepancies rarely exceed 3 fathoms and occur in areas of irregular or steeply sloping bottom. The soundings from H-3014 are generally shallower than corresponding soundings from H-9957 (DA 10-2-81). The differences in sounding technique, scale, datum, position control accuracy and an intervening earthquake (1964) all may contribute to these discrepancies. ✓

The main difference between H-3014 and H-9957 is that the density of soundings on the prior survey was not sufficient to detect the least depths shown on H-9957. The density of sounding lines on H-9957 and the number of dive investigations (discussed in Section L) revealed least depths and delineated features more completely than H-3014. Soundings and least depths shown on the final field sheet should supercede the soundings from H-3014. ✓

The following paragraphs will discuss rocks which appear on H-3014 (1909) and were investigated by the field editor or the hydrographer. All investigations by the field editor were performed in a skiff at low water. Water clarity in the area provided excellent underwater visibility. In many cases, the field editor located rocks near the positions shown for rocks on H-3014. Position discrepancies may be due to the datum shift, differing scales of the two surveys, and unknown quality of positions of rocks on H-3014. ✓

Positions given for rocks from H-3014 are referenced to NAD 27 and are to identify the rocks for discussion purposes only.

A rock indicated on H-3014 at latitude $58^{\circ}06'34.5''$ N, longitude $152^{\circ}33'44''$ W was searched for by the field editor. A rock and islet surrounded by ledge were found immediately south of the H-3014 indicated rock. The H-3014 rock symbol should be deleted and the area charted as shown on the final field sheet. *concur Chart from final smooth sheet*

Three rocks indicated on H-3014 in the vicinity of latitude $58^{\circ}06'51''$ N, longitude $152^{\circ}36'48''$ W lie in an area declared by the field editor to be foul with rocks. The individual rock symbols should be deleted from the chart. *concur Chart from smooth sheet*

A rock indicated on H-3014 at latitude $58^{\circ}07'40''$ N, longitude $152^{\circ}33'46.5''$ W was searched for by the field editor. A ledge was found immediately south of the H-3014 rock position and a significant rock was located immediately north of the H-3014 rock position, however, no rock was found at the position shown on H-3014. The rock shown on H-3014 should be deleted and the area charted as shown on the final field sheet. *concur chart from smooth sheet*

Two rocks shown on H-3014 in the vicinity of latitude $58^{\circ}07'58''$ N, longitude $152^{\circ}33'49.5''$ W were searched for by the field editor. A single rock was found to the north and west of the rocks shown on H-3014, but no rocks were found at the positions indicated on H-3014. The rocks shown on H-3014 should not be carried forward to H-9957 and the area charted as shown on the final field sheet. *concur Chart from smooth sheet*

Two rocks shown on H-3014 in the vicinity of latitude $58^{\circ}09'01.5''$ N, longitude $152^{\circ}33'47''$ W were searched for by the field editor. A ledge was found immediately west of the indicated H-3014 positions for the rocks. The ledge extends north from an islet and is identifiable on the photographs. No rocks were found in the positions shown on H-3014, however. *Chart as shown on smooth sheet*

The rocks as shown on H-3014 should be deleted and the area charted as indicated on the final field sheet. *concur Chart from smooth sheet*

A rock indicated on H-3014 at latitude $58^{\circ}09'09''$ N, longitude $152^{\circ}33'38''$ W lies in an area defined by the field editor as ledge. The rock symbol from H-3014 should be deleted and the area charted as shown on the final field sheet. Three rocks shown on H-3014 in the vicinity of latitude $58^{\circ}09'51''$ N, longitude $152^{\circ}33'41''$ W lie in an area declared by the field editor to be foul with rocks. The individual rock symbols from H-3014 should be deleted and the area charted as shown on the final field sheet. *concur, Chart from smooth sheet.*

Three rocks shown on H-3014 in the vicinity of latitude 58°09'51"N, longitude 152°33'41"W lie in an area declared by the field editor to be foul with rocks. The individual rock symbols from H-3014 should be deleted and the area charted as shown on the final field sheet. *Concur Chart from Smooth Sheet*

A rock shown on H-3014 at latitude 58°10'08.5"N, longitude 152°33'36"W, coincides with a rock compiled on TP-00297 and should be charted as located on that manuscript. A rock indicated on H-3014 at latitude 58°10'10"N, longitude 152°33'37"W lies just to the north-east of the rock compiled on TP-00297 mentioned above. This rock symbol should not be carried forward from H-3014 as the feature is a submerged ledge extending north-east from the rock shown on TP-00297. It is partially delineated by hydrography as shown on the final field sheet. *Chart as per Smooth Sheet*

A rock shown on H-3014 at latitude 58°10'10.5"N, longitude 152°33'41"W was investigated by the hydrographer. A sounding line was run over the position shown on H-3014 for the rock and a least depth of ~~4.7~~ 4.7 fathoms observed. The area was searched by launch near low water in conditions of good underwater visibility and no rock was found in the position shown on H-3014. This rock symbol should not be carried forward to H-9957. *Concur* *Pos # 3418*

A rock shown on H-3014 at latitude 58°11'52"N, longitude 152°34'06"W was investigated by the hydrographer. A sounding line was run over the indicated positions of the rock on H-3014 and a least depth of 2.86 fathoms observed. The area was then searched by skiff at low water in condition of good underwater visibility and no rock found. This rock symbol should be deleted and the area charted as shown on the final field sheet. *Concur, Chart from Smooth Sheet* *Pos # 7076/13*

A rock shown on H-3014 at latitude 58°11'56.5"N, longitude 152°34'04.5"W coincides with a rock compiled on TP-00297 at that location. The rock should be charted with surrounding ledge as shown on the final field sheet. *Concur Chart from Smooth Sheet*

Four rocks shown on H-3014 in the vicinity of latitude 58°11'23"N, longitude 152°34'49"W lie in an area declared by the field editor to be foul with rocks. The individual rock symbols from H-3014 should be deleted and the area charted as shown on the final field sheet. *Concur Chart from Smooth Sheet*

A rock shown on H-3014 at latitude 58°11'23.5"N, longitude 154°34'54"W was investigated by the hydrographer. A sounding line was run over the position indicated on H-3014 for the rock and a ~~4.5~~ 4.5 fathom sounding obtained. The area *Pos # 5137/1*

was then searched by skiff near low water in conditions of good underwater visibility. No rock was found in the indicated position. However, the field editor located a rock to the northeast of the H-3014 rock position. The H-3014 rock should be deleted and the rock located by the field editor charted as shown on the final field sheet. *Correct Chart from Smith sheet*

Two rocks shown on H-3014 in the vicinity of latitude $58^{\circ}11'10''N$, longitude $152^{\circ}35'10''W$ were investigated by the hydrographer. A sounding line was run over the indicated positions of the rocks and a least depth of 3 *x4 Post # 4669* fathoms observed. The area was then searched by skiff near low water in conditions of good underwater visibility. No rocks were found in the positions shown on H-3014. To the north along the shore is an area declared by the field editor to be foul with rocks. The rocks indicated on H-3014 should not be carried forward to H-9957 and the area should be charted as shown on the final field sheet. *Correct Chart from Smith sheet*

Two rocks shown on H-3014 in positions latitude $58^{\circ}06'33''N$, longitude $152^{\circ}36'50''W$, and latitude $58^{\circ}07'05.5''N$, longitude $152^{\circ}36'31''W$, coincide with rocks compiled on TP-00303 and should be charted as shown on the final field sheet. *Correct - Chart from Smith sheet*

L. COMPARISON WITH THE CHART

The largest scale chart of the area is chart no. 16594 Marmot Bay and Kupreanof Strait, 10th edition, July 4, 1981, at 1:78,900 scale. The charted soundings in Kazakof Bay apparently originate from survey H-3014 (1909). A comparison of soundings on H-3014 was made with those on the current survey (H-9957). The results are discussed in section K, Comparison with Prior Surveys. ✓

Thirteen dives were made to determine least depths on features or rocks during the survey. Two of the dives have been discussed in section K, Comparison with Prior Surveys, as investigations of presurvey review items. ✓

The same technique was used on all dive investigations. A pattern of tightly spaced sounding lines was run to delineate an area requiring further investigation. The divers began their search at the point of least depth determined by the launch. Using circle search techniques, the divers located the shallowest point in the area. A float was sent to the surface on a taut line attached to the bottom at that point. The launch was placed alongside the float and a detached position and check obtained. ✓
Least depth was determined by measuring the length of the taut line from the float to the point of attachment on the bottom, marked by a clip or knot in the line. Results of the remaining eleven dives are tabulated below.

J.D.	Position Number	G.P.	Least Depth	Description and Notes
222	<i>Dive</i> 5515	58°06'54.16"N 152°36'23.08"W	1. ⁵ / ₂ fm	Rocky, shallow area marked by kelp. See note 1.
222	<i>Dive</i> 5516	58°07'25.62"N 152°34'03.79"W	1. ³ / ₈ fm	Top of broad, sloping, rock ridge.
244	<i>Dive</i> 3163	58°10'19.38"N 152°35'18.11"W	4. ⁵ / ₈ fm	See notes 1 and 2
244	<i>Dive</i> 3164	58°10'20.16"N 152°35'18.20"W	4. ⁸ / ₁₆ fm	See note 2.
244	<i>Dive</i> 3165	58°10'24.08"N 152°35'16.57"W	5. ³ / ₄ fm	See note 2.
244	<i>Dive</i> 3166	58°10'51.95"N 152°34'56.29"W	5. ⁸ / ₇ fm	See note 2.
245	<i>Dive</i> 5589	58°10'51.93"N 152°35'03.90"W	4. ⁹ / ₇ fm	See note 2.
245	5590	58°10'57.39"N 152°35'00.63"W	3. ⁴ / ₄ fm	See note 1.
245	5591	58°10'49.44"N 152°34'17.40"W	2. ³⁰ / ₈ fm	High point on slab-like ridge, See note 1.
245	5592	58°10'06.10"N 152°35'08.46"W	7. ³ / ₄ fm	See note 2.
245	5593	58°10'09.45"N 152°34'32.86"W	7. ⁸ / ₇ fm	Top of slab-like ridge

Note 1: This feature was reported to the U.S. Coast Guard as a danger to navigation. Copies of the radio message and letter of notification are appended to this report. ✓

Note 2: This feature was the high point in an area of broken, rocky bottom. The bottom was generally kelp-covered. ✓

The area around position number 5515 is contained in Inset 1 (1:5,000 scale). The area around position number 5516 is contained in Inset 2 (1:5,000 scale). All other dive investigations in the table above are within the limits of Inset 5 (1:5,000 scale). ✓

An islet is charted at latitude 58°10'³⁹26"N, longitude 152°34'¹²12"W. As discussed in Section H, this feature should be re-charted as a rock surrounded by ledge in the position shown on the final field sheet. *See Section 4 of Indication Report*

Ruins are charted at latitude 58°08'12"N, longitude 152°32'59"W. This area is now occupied by an active logging camp. Details on the size and number of buildings present may be found in the Field Edit Report for TP-00303. The notation "Ruins" should be deleted from the chart. A wharf is charted near the logging camp at latitude 58°08'14"N, longitude 152°33'02"W. This wharf should remain on the chart; it is used by commercial traffic supplying the logging camp. However, it's shape differs from the charted shape. It should be charted as shown on the 1:100 scale plan on the final field sheet. The soundings shown were taken by leadline on J.D. 222, and have been reduced for predicted tides. The soundings are hand plotted, and are presented as supplemental data. *Chart as per smooth sheet.*

The present scale and coverage of chart no. 16594 are adequate for the current usage of Kazakof Bay. ✓

M. ADEQUACY OF SURVEY

This survey is sufficiently complete and adequate to warrant its use to supersede the prior survey for charting. ✓

No velocity or settlement and squat corrections have been applied to soundings on the final field sheet. ✓

N. AIDS TO NAVIGATIONS

There are no aids to navigation in the survey area.

O. STATISTICS

<u>Vessel</u>	<u>Number of Positions</u>	<u>Naut. Mi. Sdg. Lines</u>	<u>Sq. Mi. Sdg. Lines</u>	<u>Number of Bottom Samples</u>
3130	13	-	-	13
3131	1145 1104	78.75	1.55	7
3132	1587 1536 466	147.5	6.75	14
3133	417	19.85	0.4	6
Total	3162 3119	246.1	8.7	40

Number of tide stations occupied: 2
Number of Nansen Casts: 1

P. MISCELLANEOUS

Kazakof Bay is called Danger Bay by local fishermen and inhabitants of the logging camp operating in the bay.

Q. RECOMMENDATIONS

None applicable. *See Evaluation Report Section 9*

R. AUTOMATED DATA PROCESSING

The following programs were used for automated data acquisition and processing during this survey

<u>Program Number</u>	<u>Program Name</u>	<u>Version Date</u>
RK 112	Range-Range Real Time HYDROPLOT	3/19/81
RK 201	Grid, Signal, and Lattice Plot	4/18/75
RK 211	Range-Range Non-Real Time Plot	2/02/81
RK 212	Visual Station Table Load	4/01/74
RK 216	Range-Azimuth Non-Real Time Plot	2/09/81
RK 300	Utility Computations	10/21/80
RK 330	Reformat and Data Check	5/04/76
RK 407	Geodetic Inverse/Direct Computation	9/25/78
RK 409	Geodetic Utility Package	9/20/78
AM 500	Predicted Tide Generator	11/10/72
RK 530	Layer Corrections for Velocity	5/10/76
AM 602	Elinore (Line Oriented Editor)	5/20/75

Geodetic computations were made using the geodetic and triangulation programs written for the HP-9815A calculator.

S. REFERRAL TO REPORTS

Horizontal Control Report for H-9957
Field Tide Note for H-9957

Electronic Control Report for OPR-P146-FA,DA-81
Corrections to Echo Soundings Report for OPR-P146-FA,DA-81
Field Edit Reports for TP-00303 and TP-00297
Field Geographic Names (76-155)
Coast Pilot Report

Respectfully submitted,

Donald A. Dwyer

for Neil M. Bogue
LTJG, NOAA

Approved and forwarded,

N C Austin

N. C. Austin, CDR, NOAA
Commanding Officer
NOAA Ship DAVIDSON



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

NOAA Ship DAVIDSON S331
1801 Fairview Avenue East
Seattle, Washington 98102

Ref: CPM331/101-3N
Ser 7-16

20 July 1981

Afognak Native Corporation
P.O. Box 14
Kodiak, Alaska 99615

Dear Sir or Madame:

The NOAA Ship DAVIDSON plans to conduct hydrographic survey operations in Kazakof Bay, Afognak Island, during the months of July and August, 1981, for the purpose of updating the nautical chart of the area. The survey operations will include installation of survey marks, temporary hydrographic signals, and tide gages. This will have a small impact on land under your jurisdiction.

I hereby request authorization to conduct these activities, which are described in greater detail in the accompanying material. Also enclosed is a copy of the chart showing the locations of our survey operations. At the conclusion of the survey, the sites will be returned to their natural state.

This request was originally filed with the Chugach National Forest. The forest supervisor informed me that the area in question had been conveyed to the Afognak Native Corporation, hence the delay in this request.

If you require further information or would like to discuss the project or our survey operations, please contact the NOAA Ship DAVIDSON, call sign WTEK, via the Kodiak marine operator or VHF-FM channel 16 or HF 2182KHZ.

Thank you for your cooperation.

Sincerely,

N. C. Austin, CDR, NOAA
Commanding Officer
NOAA Ship DAVIDSON

Incls: a/s

NCA:jaf



10TH ANNIVERSARY 1970-1980

National Oceanic and Atmospheric Administration

A young agency with a historic
tradition of service to the Nation

OPR-P146-DA-81
DA 10-2-81 (H-9957)
PARAMETER TAPES PRINTOUT

SKEW: 90,21,52

FEST=20000
CLAT=6412000
CMER=152/45/00
GRID=30
PLSCL=10000
PLAT=58/06/17
PLON=152/32/18
VESNO=3132
YR=81
ANDIST=00.0

INSET #1
SKEW: 90,10,12

FEST=20000
CLAT=6412000
CMER=152/45/00
GRID=15
PLSCL=5000
PLAT=58/06/30
PLON=152/35/45
VESNO=3132
YR=81
ANDIST=00.0

INSET #2
SKEW: 90,8,11

FEST=20000
CLAT=6412000
CMER=152/45/00
GRID=15
PLSCL=5000
PLAT=58/07/05
PLON=152/33/30
VESNO=3132
YR=81
ANDIST=00.0

0PR-P146-DA-81
DA-10-2-81 (H-9957)
PARAMETER TAPES PRINTOUT CONT.

INSET #3
SKEW: 90,9,9

FEST=20000
CLAT=6412000
CMER=152/45/00
GRID=15
PLSCL=5000
PLAT=58/07/25
PLON=152/35/25
VESNO=3132
YR=81
ANDIST=00.0

INSET #4
SKEW:90,11,11

FEST=20000
CLAT=6412000
CMER=152/45/00
GRID=15
PLSCL=5000
PLAT=58/09/00
PLON=152/35/00
VESNO=3132
YR=81
ANDIST=00.0

INSET #5
SKEW:90,21,22

FEST=20000
CLAT=6412000
CMER=152/45/00
GRID=15
PLSCL=5000
PLAT=58/09/45
PLON=152/33/15
VESNO=3132
YR=81
ANDIST=00.0

FIELD TIDE NOTE
OPR-P146-DA,FA-1981
H-9957 DA 10-2-81
KAZAKOF BAY, ALASKA

Field tide reduction of soundings on H-9957 (DA 10-2-81) is based on predicted tides for Kodiak, Alaska, corrected to Kazakof Bay, Afognak Island (No. 1755, Tide Tables 1981, West Coast of North and South America). Tidal heights were interpolated using the DAVIDSON's PDP 8/e system and program AM 500. All times of predicted and recorded tides are Greenwich Mean Time.

Two tide stations were occupied to provide data for H-9957 (DA 10-2-81). They are listed below.

<u>Station</u>	<u>G.P.</u>	<u>Period of Operation</u>	<u>S/N</u>
Kizhuyak Pt. (945-7332)	57/53.7 N 152/39.1 W	6/12/81 - 9/4/81	73A233 64A11030
Kazakof Bay (945-7314)	58/11.4 N 152/34.1 W	6/28/81 - 9/3/81	62A92

Kizhuyak Pt. (945-7332)

The Kizhuyak Pt. tide station is on a small island approximately one mile south of Kizhuyak Pt. Two gages were installed at this site to provide redundancy in case of gage failure. Gage S/N 73A233 was designated the "upper" gage and gage S/N 64A11030 was designated the "lower" gage. These designations were based on the placement of the gages at the site and serve only to distinguish between the two gages.

The "upper" gage continuously provided good data. The clock mechanism required adjustment initially. No other problems were experienced with the gage. Based on 58 staff-to-gage comparisons, including three hours of observations at 12 minute intervals on 14 June 1981, a marigram reading of 2.28 feet corresponds to the staff zero.

The "lower" gage had a series of problems which caused interruption of the record. Data from this gage will be submitted, however, it is recommended that only data from the "upper" gage, S/N 73A233, be applied to soundings on H-9957 (DA 10-2-81).

Kazakof Bay (945-7314) *Only station used on #9857*

The gage clock mechanism required adjustment initially, as the gage was losing time at a rate of eight minutes per day. The gage continuously provided good data from the date of installation until 1610 GMT, 24 July 1981, when the paper jammed and the record was interrupted. The gage was returned to service at 1845 GMT, 25 July 1981. On 26 July 1981, the gage paper jumped ahead

one sprocket hole. The resulting time error was distributed over the period of the jump. This period was determined by noting the dimples in the gage paper caused by the sprockets as the jump occurred. The paper was changed at 1745 GMT, 26 July 1981. The gage continuously provided good data from that date until its removal.

Based on 45 staff-to-gage comparisons, including three hours of observations at 12 minute intervals on 1 July 1981, a marigram reading of 7.16 feet corresponds to the staff zero.

Leveling

The Kizhuyak Pt. tide staff was leveled to two historic bench marks (1933) and three newly established bench marks at the time of installation and removal. Bench mark No.1, 1933, is under an overhang which prevented the use of a two part level rod. A steel tape was used to level to BM 1 on 12 June 1981. A three part level rod was used successfully on 4 September 1981. An apparent change in the elevation of the staff of -0.010 meters was observed. This may be attributed to the different leveling techniques. Movement of the staff is not suspected since the staff rested on a solid rock bottom and was lag bolted directly to a rock face.

The Kazakof Bay tide staff was leveled to five newly established bench marks. No shift of the staff was observed.

Reference Station

The Kodiak, Alaska, tide station (945-7283) served as the reference station for this survey. The gage was inspected and the staff leveled to three bench marks on 11 June 1981, prior to beginning hydrography. The Pacific Tide Party performed their annual inspection of the gage on 19 July 1981, and replaced the tide staff at that time. DAVIDSON personnel inspected the gage on 28 August 1981, after the completion of the project, and found the gage not operating. The clock had stopped, the gas bottle was empty, and no observations had been made for over 10 days. DAVIDSON personnel restarted the gage, replaced the gas bottle, and leveled the tide staff to three bench marks. An attempt to contact the Kodiak tide observer failed and the Pacific Tide Party was informed of the situation.

The change of tide staff resulted in a discrepancy of approximately 1.6 feet in the elevation of the bench marks above staff zero between the June and August levels. The leveling results obtained by DAVIDSON personnel agree favorably with the results obtained by the Pacific Tide Party when the new staff was installed.

The Seldovia, Alaska, tide station (945-5500) should be used as the reference station for this survey during those periods when data from the Kodiak tide station is unavailable.

Zoning Recommendations

Tide data from Kazakof Bay (945-7314) should be used to reduce soundings on H-9957 (DA 10-2-81).

Respectfully submitted,

Neil M. Bogue

Neil M. Bogue
LTJG, NOAA

Approved and forwarded,

N.C. Austin

N. C. Austin, CDR, NOAA
Commanding Officer
NOAA Ship DAVIDSON

OPR-P146-DA-81
DA-10-2-81 (H-9957)
PREDICTED TIDES CORRECTOR TAPE PRINTOUT

KODIAK, ALASKA
1755(KAZAKOF BAY, MARMOT BAY)
58 08 152 34 0.08 0.09 0.9 0.3 1.0 1.0
000
FM
0.2

OPR-P146-DA-81
DA-10-2-81(H-9957)
VELOCITY AND TC/TI TAPES PRINTOUT

VELOCITY TAPE:

000028 0 0000 0002 001 000000 009957
000085 0 0001
000145 0 0002
000215 0 0003
000285 0 0004
000355 0 0005
000432 0 0006
000520 0 0007
000601 0 0008
000690 0 0009
000780 0 0010

TC/TI TAPES:

See Smooth Printout for correct data.

SHIP DAVIDSON(3130) FOR B.S.
191000 0 0000 0002 210 313000 000000
235900 0 0000

LAUNCH DA-1(3131)

185101 0 0003 0002 204 313100 000000
194246 0 0003 0002 244 313100 000000
235900 0 0003

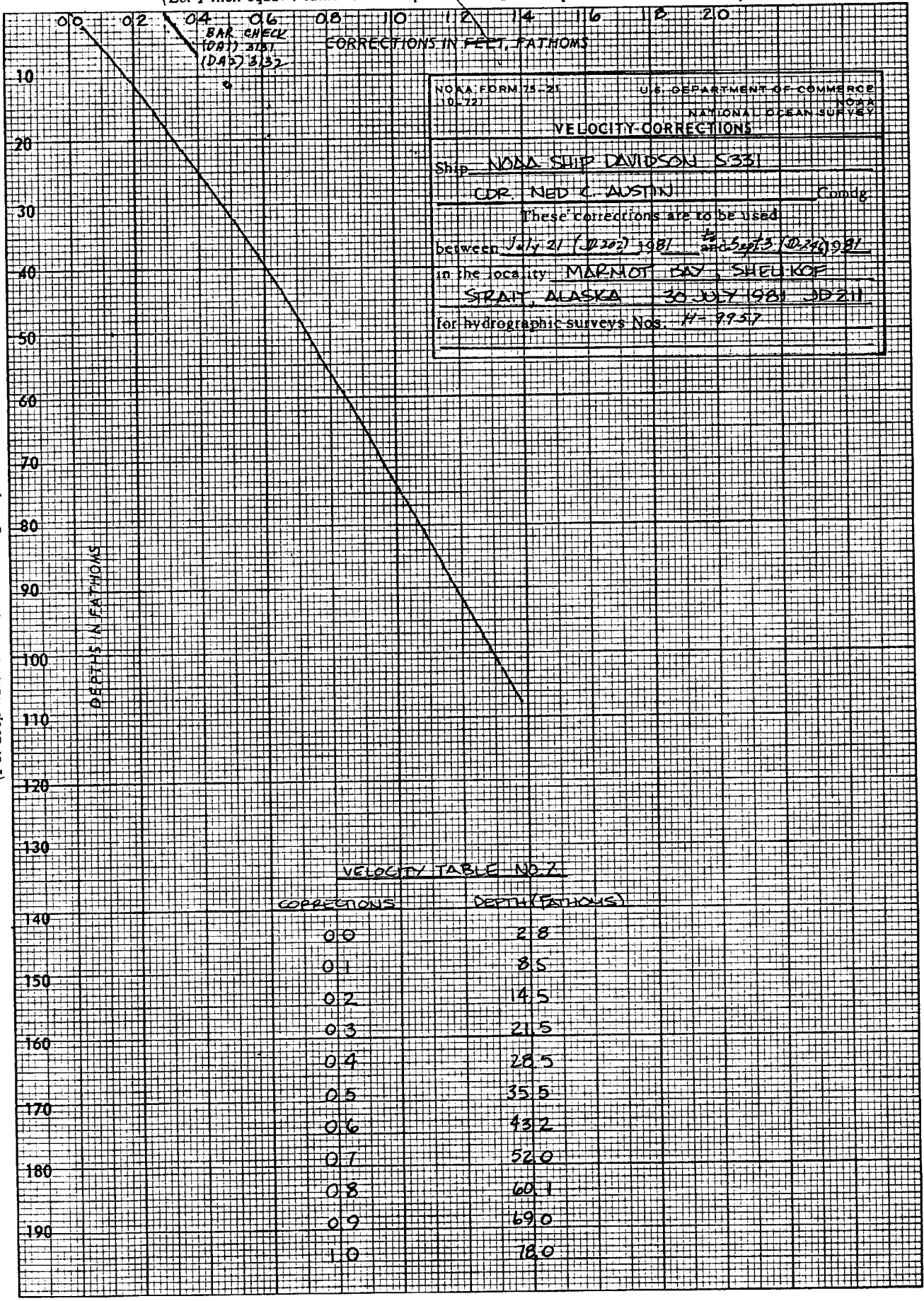
LAUNCH DA-2(3132)

180052 0 0003 0002 202 313200 000000
194523 0 0003 0002 245 313200 000000
235959 0 0003

SKIFF(3133)

013900 0 0020 0002 207 313300 000000
000001 0 0020 0002 246 313300 000000
235900 0 0020

(Let 1 inch equal 4 fathoms for deep water and 1 inch equal 0.4 fathom for shoal.)



(For deep water add a 0 to these figures)

VELOCITY TABLE NO. 7

CORRECTIONS	DEPTH (FATHOMS)
0.0	2.8
0.1	8.5
0.2	14.5
0.3	21.5
0.4	28.5
0.5	35.5
0.6	43.2
0.7	52.0
0.8	60.1
0.9	69.0
1.0	78.0

46 1240

20 X 20 TO THE INCH • 7 X 10 INCHES
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K-E

WORKSHEET

3131 (DA-1)

H-9957 (OPR-P146-DA-81)

DA 10-2-81

JD	TRUE DEPTH	1.0	2.0	3.0	4.0	5.0	6.0	7.0	REMARKS	QUALITY
204/205	0.7	1.7	2.7	3.7	4.6				AM ONLY	FAIR
205/206	0.7	1.65	2.6	3.65	4.6	5.6			AM	GOOD
	0.7	1.6	2.65	3.65	4.5	5.5			PM	GOOD
209/210	0.6	1.6	2.6	3.6	4.6	5.6	6.5		AM	FAIR
	0.7	1.7	2.7	3.7	4.7	5.7	6.7		PM	GOOD
210/211	0.7	1.65	2.7	3.6	4.6	5.6			AM	GOOD
	0.7	1.7	2.7	3.7	4.7	5.7			PM	GOOD
223/224	0.7	1.7	2.6	3.6	4.55	5.6			AM	GOOD
	0.7	1.7	2.7	3.65	4.65	5.6			PM	GOOD
MEAN	0.69	1.67	2.66	3.65	4.61	5.61	6.6			
TRA	0.31	0.33	0.34	0.35	0.39	0.39	0.40			
				TRA = 0.3 fm from intercept with depth = 0						

WORKSHEET

3132 (DA-2)

DA 10-2-81

H-9957 (OPR-P146-DA-81)

JD OBSERVED	TRUE DEPTH	1.0	2.0	3.0	4.0	5.0	6.0	REMARKS	QUALITY
202/203	0.7	1.65	2.7	3.65	4.65	5.6		AM	GOOD
	0.65	1.7	2.7	3.7	4.6	5.65		PM	GOOD
203/204	0.7	1.65	2.65	3.65	4.6	5.6		AM	GOOD
	0.7	1.65	2.65	3.60	4.6	5.65		PM	GOOD
204/205	0.7	1.7	2.7	3.65	4.6	5.6		AM	GOOD
	0.7	1.7	2.7	3.65	4.65	5.6		PM	GOOD
205/206	0.7	1.7	2.7	3.65	4.65	5.6		AM ONLY	GOOD
206/207	0.65	1.8	2.7	3.6	4.6	5.6		AM	FAIR
	0.7	1.7	2.65	3.65	4.6	5.6		PM	GOOD
207/208	0.7	1.7	2.7	3.65	4.65	5.65		AM	GOOD
	0.7	1.7	2.7	3.7	4.70	5.6		PM	GOOD
210/211	0.7	1.7	2.7	3.7	4.6	5.6		AM	GOOD
224	0.7	1.7	2.7	3.7	4.6	5.6		AM	GOOD
	0.7	1.7	2.7	3.7	4.65	5.6		PM	GOOD
MEAN	0.69	1.70	2.69	3.66	4.62	5.61			
TRA	0.31	0.30	0.31	0.34	0.38	0.39			
TRA = 0.3 fm from intercept with Depth = 0									

WORKSHEET

H-9957

DA 10-2-81

SKIFF (3133)

JD OBSERVED	TRUE DEPTH 6 FT	12 FT	18 FT	24 FT.	30 FT		REMARKS	QUALITY
JD-207	4.2	10.0	16.0	22.0	27.7		AM	Good
	4.1	10.0	15.9	21.9	—			
	4.0	9.8	15.9	21.9			PM	FAIR
	4.2	9.9	15.9	—				
JD-208	4.2	10.4	16.1	22.0	27.8		AM ONLY	Good
	4.4	10.2	16.1	22.0				
MEAN	4.18	10.05	15.98	21.96	27.75			
	1.82	1.95	2.02	2.04	2.25			
				TRA = 2.01 FEET				

SETTLEMENT AND SQUAT

TIDE STAFF
READING
(ft)

4.0
3.0
2.0

TIME

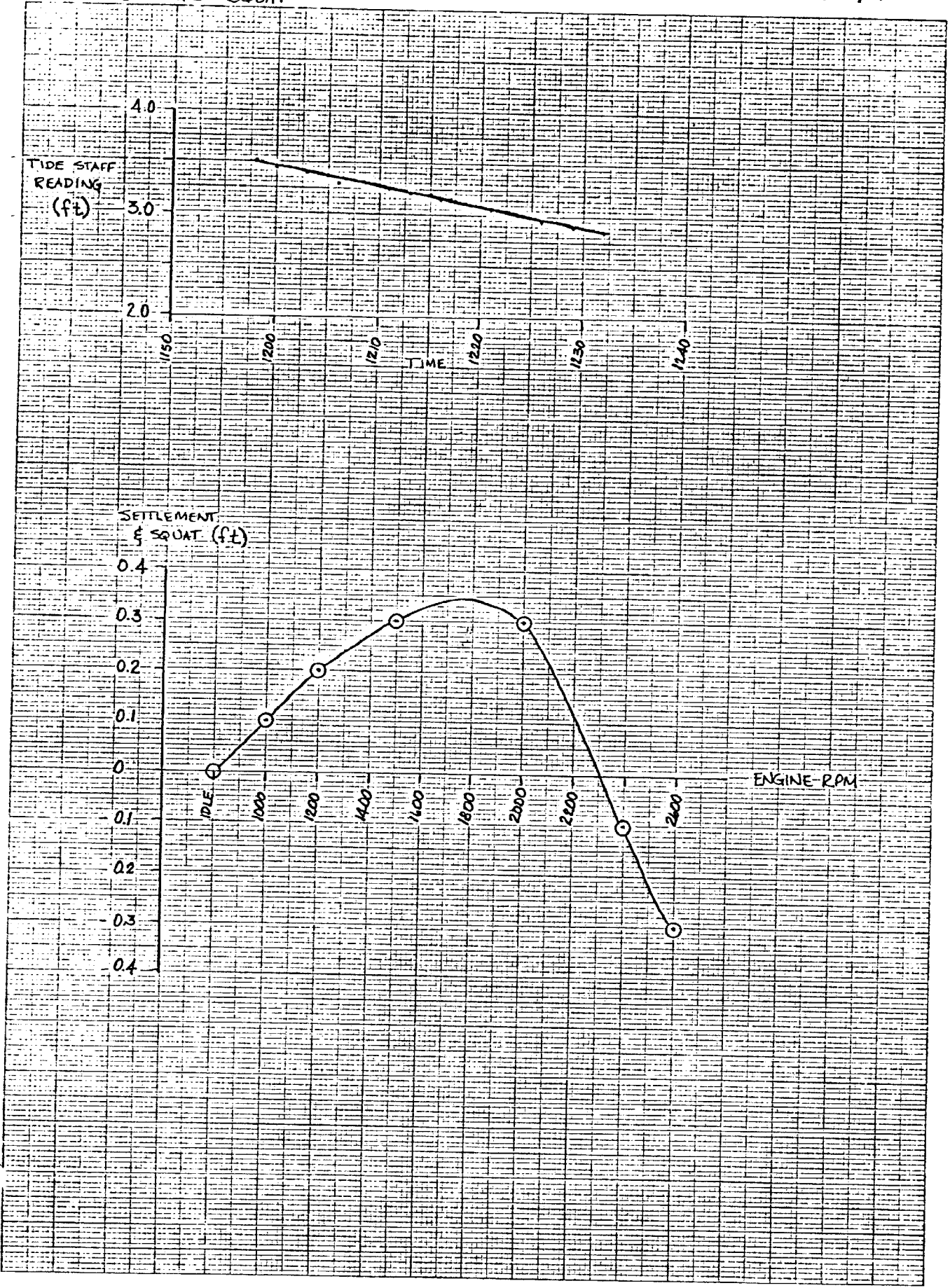
12:50 12:00 12:10 12:20 12:30 12:40

SETTLEMENT
& SQUAT (ft)

0.4
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
-0.4

ENGINE RPM

IDLE 1000 1200 1400 1600 1800 2000 2200 2400



DA-1
24 MAR 1981
PUGET SOUND

RUN #	TIDE CORR. (3.5 - STAFF RDG)	OBSERVED ELEVATION	CORRECTED ELEVATION (OBS - TIDE CORR)	SETTLEMENT & SQUAT (CORR ELEV - STATO)	ENGINE RPM
1198	0.0	3.9	3.9	0.0	IDLE
1203	0.1	4.1	4.0	0.1	1000
1213	0.3	4.45	4.15	0.25	1200
1216	0.35	4.55	4.20	0.30	1500
1219	0.4	4.65	4.25	0.35	2000
1226	0.55	4.4 (AV)	3.85	- 0.05	2400
1232	0.65	4.35 (AV)	3.70	- 0.20	2600
1249	0.05	3.93	3.88	0.0	IDLE
1206	0.2	4.1	3.9	0.02	1000
1211	0.25	4.35	4.10	0.22	1200
1215	0.3	4.45	4.15	0.27	1500
1217	0.35	4.50	4.15	0.27	2000
1221	0.55	4.28 (AV)	3.73	- 0.15	2400
1229	0.6	4.0 (AV)	3.4	- 0.48	2600

COMBINED POC & STD OBSERVATIONS	
ENGINE RPM	SETTLEMENT & SQUAT (FT)
IDLE	0.0 = 0.0
1000	0.06 = 0.1
1200	0.24 = 0.2
1500	0.28 = 0.3
2000	0.31 = 0.3
2400	- 0.10 = - 0.1
2600	- 0.34 = - 0.3

FOR

STOP

ELECTRONIC CORRECTOR ABSTRACT

RESSEL : 3133

SHEET : DA 13-2-81

TIME	DAY	PATTERN 1	PATTERN 2
191333	213	+33333	+33331

ELECTRONIC CORRECTOR ABSTRACT

JESSEL : 3131

SHEET : DA-13-2-61

TIME	DAY	PATTERN 1	PATTERN 2
181531	204	-33332	+333343
192534		+33333	+33333
191910		+33333	-33332
192445		+333343	+33333
223917		+33333	-33332
221422		+333343	+33333
333332	205	-33332	+333343
313332		+333343	+33333
313224		+33333	-33332
314335		-33332	+333343
321747		+33333	-33332
324458		-33332	+333343
181247	206	+33332	-33332
185837		-33332	-33332
201235	205	+333343	+33332
333359	205	+333343	+33332
182555	209	+33333	-33332
185333		-33332	+33333
203335		+33333	-33332
224339		-33332	+33333
233215	209	-33332	-33332
333115	210	-33332	+33333
185347	210	-33332	+333343
193110		+333343	+33333
214137		+333343	+33332
223330		+333343	+33333
232157		+333343	+33332
333335	211	+33334	+33332
184417	223	+33333	-33334
234255		+33333	+33332
234934		+33333	+33332
333213	224	+33333	+33332
194245	224	+33333	+33332
234525		+33333	+33333
235355		+33332	+33333

ELECTRONIC CORRECTOR ABSTRACT

ISSUE : 3132

SHEET : DA 19-2-81

TIME	DAY		PATTERN 1	PATTERN 2
100002	203	*	+00000	-00002
213127		*	-00002	-00002
050075	203	*	-00002	-00002
100001	203	*	-00002	-00002
202044		*	+00000	-00002
303003	204	*	+00000	-00002
102057	204	*	-00002	-00001
002255	205	*	+00002	+00000
104035	205	*	+00002	+00000
023433		*	+00002	-00001
000300	207	*	+00002	-00001
215020	210	*	+00000	+00000
201015	210	*	+00002	-00001
203004		*	-00002	-00001
203020		*	+00002	+00000
000000	211	*	+00002	+00000
004032		*	+00002	-00001
203010	212	*	-00001	-00001
203037		*	+00004	-00002
203450		*	-00001	-00001
104020	215	*	+00004	+00000
				-0000V

RANGE/AZIMUTH CORRECTOR ABSTRACT

VESSEL : 3132

SHEET : DA 18-2-31

TIME	DAY	PATTERN 1	PATTERN 2
193515	235	+33333 ✓	.
330133	235	+33333 ✓	.
181333	237	-33331 ✓	.
333923	238	-33331 ✓	.
150529	238	-33331 ✓	.
333123	239	-33331 ✓	.
182533	213	-33332 ✓	.
181333	224	-33332 ✓	.
222033	224	-33331 ✓	.

No Corrections

ELECTRONIC CORRECTOR ABSTRACT

ASSEMBL : 3133

SHEET : DA 13-2-81

TIME	DAY	PATTERN 1	PATTERN 2
213200	218	+33333	+33333
221400	222	+33333	+33333
235500	222	+33333	+33333

RANGE/AZIMUTH CORRECTOR ABSTRACT

VESSEL : 3133

SHEET : DA 10-2-81

TIME	DAY	PATTERN 1	PATTERN 2
013900	207	-30004	.
190000	207	-30003	.
105100	208	-30004	.
200000	209	-30004	.
214100	209	+30002	.
000000	210	+30002	.
100000	222	+30000	.
100000	223	+30000	.
213400	223	+30002	.
210000	244	-30002	.
000100	245	-30002	.
220000	245	-30002	.
000001	245	-30002	.

No Corrections

024	5	57 57 35836	152 43 58955	250 0009 000000
		ARCH 1981		
025	2	57 58 03677	152 44 20785	254 0001 000000
		BUOY 1981 (TEMP. PT)		
026	1	57 59 25246	152 28 12693	139 0089 000000
		TRIP 1932		
027	3	57 55 28804	152 33 05815	139 0000 000000
		THREE BROTHERS REEF LIGHT 1967		
028	0	58 00 08333	152 41 05097	139 0054 000000
		SHUYAK 1907		
029	5	58 02 16376	152 39 48198	139 0002 000000
		ALEX 1933		
030	3	58 04 39187	152 37 17168	250 0013 000000
		NUB 1909-1971		
031	3	58 07 56568	152 35 57067	254 0004 000000
		PICO 1981 (TEMP. PT)		
032	0	58 10 03153	152 35 29158	250 0006 000000
		CHICK 1981		
033	4	58 11 24167	152 34 09485	250 0008 000000
		KAZAKOF 1971-1981		
034	6	58 09 42417	152 34 13441	250 0005 000000
		DEER 1981		
035	2	58 06 22384	152 34 05756	250 0007 000000
		ZODIAK 1981		
036	2	58 09 42947	152 34 12803	254 0005 000000
		DEER ECC. 1981		
037	2	57 51 32791	152 47 15688	139 0009 000000
		BROWN 2 1933		
038	1	57 56 40338	152 31 01795	250 0007 000000
		SMALL 1933		
039	5	58 00 09229	152 41 02573	250 0020 000000
		HOG ISLAND LIGHT 1981		
040	1	57 48 08806	152 34 31783	139 0732 000000
		PYRAMID MOUNTAIN 1907		
041	4	58 08 17140	152 33 02141	253 0002 000000
		DOC 1981 (TEMP. PT)		
042	3	58 12 40260	152 33 52200	253 0002 000000
		ISLET 1981 (TEMP. PT)		
043	4	58 12 40390	152 33 15600	243 0000 000000
		PASS POINT (TEMP. PT)		

ABSTRACT OF POSITIONS
DA-10-2-81 (H-9957)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>SI</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
205	4667-4731	112	032	---	R/AZ	Mainscheme
205	4732-4739	112	032	---	R/AZ	X-Line
205/206	4740-4798	112	032	---	R/AZ	Splits
206	4800-4833	112	032	---	R/AZ	Shoreline
206	4834-4837	112	032	---	R/AZ	X-Line
206	4838-4858	042	034	---	035	Development
206	4859-4864	042	034	---	035	Splits
206	4865-4911	042	034	---	035	Development
206	4912-4939	042	034	---	035	Splits
206	4944-4954	042	034	---	035	X-Lines
206	4955-4972	042	034	---	035	Splits
206/207	4973-5110	042	034	---	032	Splits
207	5111-5215	112	032	---	R/AZ	Mainscheme
207	5216-5223	112	032	---	R/AZ	X-Line
207/208	5224-5311	112	032	---	R/AZ	Fill-Ins
207	7005-7012	112	033	---	R/AZ	Mainscheme
207	7013-7035	112	033	---	R/AZ	X-Lines
207	7036-7081	112	033	---	R/AZ	Mainscheme
207	7082-7109	112	033	---	R/AZ	Splits
208	5312-5393	112	032	---	R/AZ	Mainscheme
208	5394-5396	112	032	---	R/AZ	D.P.'s
208	5397-5407	112	032	---	R/AZ	Mainscheme
208	5409-5416	112	032	---	R/AZ	X-Lines
208/209	5417-5431	112	032	---	R/AZ	Mainscheme
208	7110-7130	112	033	---	R/AZ	Splits
208	7131-7133	112	033	---	R/AZ	Mainscheme
208	7134-7168	112	033	---	R/AZ	Shoreline
208	7169-7176	112	033	---	R/AZ	Channel Lines
208	7177-7188	042	034	---	032	Mainscheme
209	7190-7199	042	034	---	032	Mainscheme
209	2515-2520	042	032	---	033	Mainscheme
209	2521-2523	042	031	---	032	Development
209	2524-2529	042	031	---	032	Shoreline
209	2531-2565	042	031	---	032	Splits
209	2569-2580	042	032	---	033	Mainscheme
209	2581-2591	042	032	---	033	Shoreline
209	2592-2603	042	032	---	033	Splits
209	2605-2625	042	031	---	032	Splits
209	2626-2629	042	031	---	032	X-Line
209	2630-2634	042	030	---	031	Bottom Samples
209/210	2635-2636	042	031	---	032	Bottom Samples
209	7200-7203	112	033	---	R/AZ	Bottom Samples
209	7210-7247	112	036	---	R/AZ	Bottom Samples
210	0001-0013	042	031	---	032	Bottom Samples
210	2637-2654	042	033	---	034	Splits
210	2655-2669	042	033	---	034	Development
210	2670-2791	042	034	---	032	Mainscheme
210	2792-2812	042	034	---	035	Mainscheme
210	2817-2820	042	034	---	035	Split

ABSTRACT OF POSITIONS
DA-10-2-81 (H-9957)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
210	2821-2827	042	034	---	035	Shoreline
210	2828-2842	042	034	---	032	Splits
210/211	2843-2907	042	034	---	035	Splits
210	5432-5457	112	031	---	R/AZ	Mainscheme
210	5458-5469	112	031	---	R/AZ	Shoreline
210	5470-5478	112	031	---	R/AZ	X-Lines
210	5477-5480	112	031	---	R/AZ	Shoreline
210	5481-5499	042	034	---	032	Mainscheme
210	5500-5502	042	034	---	032	Bottom Samples
210	5503-5506	042	031	---	032	Bottom Samples
210/211	5507-5512	042	034	---	035	Bottom Samples
211	5513-	042	034	---	032	Bottom Sample
210	7248-7259	112	036	---	R/AZ	Shoreline
222	5514-5515	042	034	---	035	Detached Positions
222	5516-	042	031	---	032	Detached Position
222	5517-	042	034	---	035	Detached Position
222	7260-7273	112	035	---	R/AZ	Shoreline
222	7274-7287	042	034	---	035	Mainscheme
222	7288-7291	042	034	---	035	Shoreline
222	7292-7304	112	035	---	R/AZ	Shoreline
222	7305-7325	112	035	---	R/AZ	Mainscheme
223	7326-7328	112	035	---	R/AZ	X-Line
223	7329-7331	112	035	---	R/AZ	Shoreline
223	7332-7334	112	035	---	R/AZ	Mainscheme
223	7335-7344	112	035	---	R/AZ	Shoreline
223	7345-7347	112	035	---	R/AZ	Fill In
223	7348-7368	112	035	---	R/AZ	Shoreline
223	7371-7373	112	035	---	R/AZ	Detached Positions
223	2921-2934	042	034	---	032	Splits
223	2935-2952	042	034	---	032	X-Lines
223	2955-2992	042	034	---	032	Splits
223	2993-3009	042	034	---	032	X-Lines
223	3010-3046	042	034	---	032	Splits
223	3047-3065	042	034	---	032	X-Lines
223	3066-3069	042	034	---	032	Fill-In
223	3070-3129	042	034	---	032	Mainscheme
223	3130-3134	042	034	---	032	X-Line
223	3135-3140	042	034	---	031	Mainscheme
223	3141-3149	042	034	---	031	X-Lines
223/224	3150-3162	042	034	---	031	Fill-Ins
224	5518-5570	112	032	---	R/AZ	Splits
224	5572-5580	112	035	---	R/AZ	Splits
224	5581-5588	112	035	---	R/AZ	Shoreline
244	3163-3166	042	034	---	032	Detached Positions
244	3167-3169	042	033	---	034	Bottom Samples
244	7374-7395	112	041	---	R/AZ	Mainscheme
244	7396-7401	112	041	---	R/AZ	X-Line
245	7408-7439	112	042	---	R/AZ	Mainscheme

ABSTRACT OF POSITIONS
DA-10-2-81(H-9957)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
202	4001-4019	042	035	---	030	X-Lines
202	4020-4110	042	035	---	030	Mainscheme
202	4111-4185	042	030	---	031	Mainscheme
202/203	4186-4214	042	030	---	031	Shoreline
203	4215-4295	042	030	---	031	Splits
203	4296-4298	042	030	---	031	X-line
203	4299-4304	042	030	---	031	Splits
203	4305-4353	042	035	---	030	Splits
203	4354-4356	042	035	---	030	X-Lines
203	4357-4385	042	035	---	030	Mainscheme
203	4386-4396	042	035	---	030	Splits
203/204	4397-4412	042	035	---	030	Shoreline
204	4413-4418	042	035	---	030	X-Line
204	2001-2012	042	033	---	034	Shoreline
204	2013-2023	042	033	---	034	X-Line
204	2026-2029	042	034	---	032	X-Line
204	2030-2034	042	032	---	033	X-Line
204	2035-2038	042	034	---	032	X-Line
204	2047-2099	042	034	---	032	Mainscheme
204	2101-2104	042	032	---	033	Shoreline
204	2105-2166	042	034	---	032	Mainscheme
205	2167-2230	042	033	---	034	Splits
205	2231-2245	042	034	---	032	Fill in
205	2246-2249	042	032	---	033	Fill in
205	2250-2264	042	033	---	034	Shoreline
205	2266-2287	042	032	---	033	Mainscheme
205	2288-2290	042	033	---	034	Shoreline
204	4419-4501	042	031	---	032	Mainscheme
204	4502-4521	042	031	---	032	X-Line
204	4522-4566	042	031	---	032	Splits
205	4567-4575	042	034	---	035	Splits
205	4576-4578	042	034	---	035	X-Line
205	4579-4642	042	034	---	035	Mainscheme
205	4643-4666	042	034	---	035	Shoreline
205	2291-2308	042	035	---	030	Splits
205	2309-2313	042	035	---	030	X-Line
205	2314-2325	042	035	---	030	Development
205	2326-2328	042	035	---	030	X-Line
205	2329-2341	042	034	---	035	Mainscheme
205	2342-2443	042	034	---	035	Splits
205	2444-2449	042	034	---	035	Development
205	2450-2453	042	034	---	035	Split
205	2454-2457	042	034	---	035	Development
205	2458-2485	042	034	---	035	Splits
205/206	2486-2511	042	034	---	035	Shoreline

ABSTRACT OF POSITIONS
DA-10-2-81 (H-9957)

<u>DAY</u>	<u>POSITIONS</u>	<u>CNTRL</u>	<u>S1</u>	<u>M</u>	<u>S2</u>	<u>REMARKS</u>
245	5589-5591	042	034	---	032	Detached Positions
245	5592-	042	033	---	034	Detached Position
245	5593-	042	034	---	032	Detached Position
245/246	7440-7487	112	042	---	R/AZ	Mainscheme

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

TO BE CHARTED
 TO BE REVISED
 TO BE DELETED

REPORTING UNIT
(Field Party, Ship or Office)
DAVIDSON

STATE
ALASKA

LOCALITY
WHALE PASSAGE

DATE
9 Aug 81

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

LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY

- HYDROGRAPHIC PARTY
- GEODETIC PARTY
- PHOTO FIELD PARTY
- COMPILATION ACTIVITY
- FINAL REVIEWER
- QUALITY CONTROL & REVIEW GRP.
- COAST PILOT BRANCH

(See reverse for responsible personnel)

The following objects HAVE BEEN INSPECTED FROM SEAWARD TO DETERMINE THEIR VALUE AS LANDMARKS.

DATUM

N.A. 1927

SURVEY NUMBER
TP-00311

JOB NUMBER
PH-7017

OPR PROJECT NO.
OPR-P146-DA/FA-81

METHOD AND DATE OF LOCATION (See instructions on reverse side)

CHARTING
NAME

DESCRIPTION
(Record reason for deletion of landmark or aid to navigation.
Show triangulation station names, where applicable, in parentheses)

None

POSITION

LATITUDE

° /

D.M. Meters

//

° /

D.P. Meters

LONGITUDE

//

D.P. Meters

OFFICE

FIELD

CHARTS
AFFECTED

16594

NOAA FORM 75-44
(11-72)

NOAA SHIP DAVIDSON S331

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

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

VESSEL	DATE	SAMPLE POSITION		DEPTH (Fathoms)	WEIGHT OF SAM- PLER	AP. PROX. PENE- TRA- TION	LENGTH OF CORE	COLOR OF SEDI- MENT	FIELD DESCRIPTION	CHECKED BY	DATE CHECKED	REMARKS (Unusual conditions, cohesiveness, detrital cutter, size, type of bottom relief, etc.)	OBS. INIT.
		LATITUDE	LONGITUDE										
8130 SHIP	29 JULY JD 210	08°10'18"	152°34'12"						fne S, brk Sh	RJF	30 JULY 81		ED
	JD 210	08°09'12"	152°34'36"					bk	M				ED
	JD 210	08°08'50"	152°34'44"					bk	M				ED
	JD 210	08°08'30"	152°35'00"					bk	M				ED
	JD 210	08°08'16"	152°34'36"					gy	M, fne S				ED
	JD 210	08°07'44"	152°34'36"					gy	M				ED
	JD 210	08°07'16"	152°34'43"					gy	M				ED
	JD 210	08°06'58"	152°34'54"					gy	M, fne S				ED
	JD 210	08°07'04"	152°35'31"					gy	M				ED
	JD 210	08°07'24"	152°35'08"					bk	M				ED
	JD 210	08°07'57"	152°35'04"					gy	M				ED
	JD 210	08°08'20"	152°35'13"					gy	M				ED
	JD 210	08°08'47"	152°35'06"					gy	M				ED

VESSEL
3132 LAULUGH

PROJ. NO.
OPR-P46-DA

YEAR
81

DA 10-2-81

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

CHECKED BY
[Signature]

DATE CHECKED
30 JULY 1981

FIX. SERIAL NO.	DATE	SAMPLE POSITION		DEPTH (Fathoms)	WEIGHT OF SAMPLER	AP. PROX. PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesion, detrital matter, etc.)	OBS. INIT.
		LATITUDE	LONGITUDE								
5500	29 JULY JD 210	58°10'52"	152°34'59"	11.9	10			br	S, M		[Signature]
5501	JD 210	58°10'59"	152°34'21"	15.7	10			br	S, M, R, P		[Signature]
5502	JD 210	58°10'43"	152°34'29"	17.3	10			br	S, M		[Signature]
5503	JD 210	58°09'34"	152°33'56"	30.2	10			br	S, M		[Signature]
5504	JD 210	58°09'14"	152°33'46"	23.9	10			br	S, Sh, M		[Signature]
5505	JD 210	58°08'40"	152°33'45"	20.5	10			br	S, Sh, M		[Signature]
5506	JD 210	58°08'28"	152°33'29"	15.5	10			br	S, M, Sh		[Signature]
5507	JD 210	58°09'15"	152°35'59"	11.6	10				rky, P, Sh		[Signature]
5508	30 JULY JD 211	58°08'40"	152°36'06"	20.2	10			br	S		[Signature]
5509	JD 211	58°07'41"	152°35'58"	19.5	10			br	S, M, Sh, P		[Signature]
5510	JD 211	58°07'20"	152°36'07"	7.0	10				hrd		[Signature]
5511	JD 211	58°07'03"	152°36'13"	14.8	10			br	S, M, Sh		[Signature]
5512	JD 211	58°06'38"	152°36'28"	16.7	10				rky, hrd		[Signature]
5513	JD 211	58°10'32"	152°35'00"	18.9	10				rky, hrd		[Signature]

Use more than one line per sample if necessary.

DAY # LAUNCH

COMMENTS AND INITIALS OF OIC

202/ 203	3132	FIX NO 4001-4110: X-LINE & 180M SPACING MAINSCHEME ON W SIDE OF KAZAKOF BAY USING NUB (CODE 3) & ZODIAC (CODE 4). FIX NO 4111-4214: MAINSCHEME & SHORELINE ON E SIDE OF BAY USING NUB (CODE 3) & PICO (CODE 5). CROSSED BASELINE (3 TIMES) FOR SYSTEM CHECK - EXCELLENT RESULTS. CALM SEA - SOME FISHING BOATS & NETS IN BAY. BOAT WORKED WELL 28.4 MILES TOTAL
203/ 204	3132	FIX NO. 4125-4304: 90 & 45m SPLITS ON E SIDE OF KAZAKOF BAY CONTROL: NUB (CODE 3) & PICO (CODE 5) FIX NO 4305-4418: SPLITS, SHORELINE, AND CROSS LINE MAINLY ON W SIDE OF BAY-CONTROL: NUB (CODE 3) & ZODIAC (CODE 4). CROSSED BASELINE FOR SYSTEM CHECK - GOOD RESULTS. BOAT WORKED WELL. 17.4 MILES TOTAL
204/ 205	3132	MAINSCHHEME, SPLITS, & SHORELINE E & W SIDE OF KAZAKOF BAY. CROSSED BASELINE FOR SYSTEM CHECK. USED PICO-DEER & PICO-ZODIAC BASELINE FOR CHECK ON DEER-ZODIAC PAIR, SINCE SIGNAL FROM DEER (CODE 2) WAS NOT AVAILABLE ON THE BASELINE. PROGRAM LOAD ERRORS (VARIOUS TIMES) CLEANED READER 27.5 MILES TOTAL
205/ 206	3132	MAINSCHHEME SPLITS & SHORELINE IN N.W. SPUR OF KAZAKOF BAY RANGE AZIMUTH FROM CHICK INITIAL ON DEER & INITIAL ON KAZAKOF. LOGGER WORKED WELL CALM - NO SEA OR SWELL VISIBILITY OBSCURED IN AM CODE 6 CHICK 467-4837 D/A
206/ 207	3132	Main scheme, splits, & development (on 10 fm PSR Item). Used DEER (code 2) and ZODIAC (code 4). Crossed DEER-ZODIAC in AM to get check - lost signal immediately after crossing baseline. In PM, used DEER (code 2) & CHICK (code 6). Crossed baseline & also CHICK-ZODIAC for closing system check. DISAPPOINTED
		Problems: Sprocket on flatbed plottter adjusting. Hard to get a good smooth load on mylar field sheets. Also have noticed numerous small but annoying errors in program execution. These are solved by reloading the program from scratch. DO NOT USE 2° ADDRESSES FOR STARTING. Otherwise all OK.
207/ 208	3132	Range-azimuth from CHICK (code 6) near KAZAKOF and on NE side of bay. Ran arcs & radial lines. Good results. Crossed CHICK-DEER baseline for system check. M/R console stopped providing rates - re-selected card in R/T unit - problem solved. POS No 53111-53111 otherwise all OK. Logger worked well
208/ 209	3132	Range-azimuth from CHICK (code 6) in bay near logging camp, and hole behind site of station BING, 1909 (not found). Crossed CHICK-DEER (AM) and CHICK-KAZAKOF (PM) baselines for system check. Good results. POS. No 533812-5431
210	3132	TTY PAPER PUNCH FOR LOGGER FIXED LAL
222	3132	4 DPS & LEAST DEPTHS FROM DIVING ON BLOW-UPS # 1, 2, 3, 4 PROBLEMS: HAD TO RE-SEAT CARD IN R/T TO GET ANY M/R. PLOTTER FAILED FOR 3 MINUTES THEN RESTARTED. DP REQUIRED ROSS ON SOMETIMES.

DAY # LAUNCH COMMENTS AND INITIALS OF OIC

224	3132	R-AZ from CHICK & ZODIAC: Crossed baselines CHICK-DEER and CHICK-ZODIAC for systems check. Filled in various holes on DA 10-2-81. T/C ones, two soundings in to shoreline. Logger wouldn't give tick marks on fathogram for in-between soundings or long mark when long word button pushed. Also, left channel signal strength meter reads 0 of 1 when it means B and D. Both problems solved in evening by ETA. POS NO 5518-5588. TMM
245	3132	Dive DPs 716/709 Console/RT No major problems experienced ran with uncalibrated Console/RT pair (since cards were changed) data to be computed from from ending 5589 - 5593 baseline calibration correctors. CODE 2 DEER CODE 3 CHICK CODE 4 KAZANOF DIA

DAY # LAUNCH

COMMENTS AND INITIALS OF OIC

207	3133	Began totally manual R/Az plus recon. shaky but workable Back Bay (Nemat is unsurveyable with this fatho due to heavy submerine grass) Raytheon fatho 7005-7023 CODE 1 KAZAKOF Console, R-T 707/719 DIA
207	3133	R/Az continues in Back bay Fathometer take up intermittent - greased - solved. problem. Bar checks are somewhat of a problem - can vary TR1 in 0.5 ft by shifting personnel around. M/R console died - dead batteries, terminating day. Daily system check shows CODE 1 off by 10 meters. 7024-7039 CODE 1 KAZAKOF 707/719 DIA
222 210	3133	R/Az + creative hydro system functioned well picking up all the moldy leftovers on 10-2-81 7260-7325 CODE 5 ZODIAC 707/719 DIA
223	3133	R/Az radio problems. more fungus encrusted leftovers to pick up 7326-7373 CODE 5 ZODIAC CODE 3 CHICK 707/719 DIA

DAY # LAUNCH COMMENTS AND INITIALS OF OIC

204 205	3/31	<p>MAINScheme ON 10-2 light winds boathran well n/r problems with CODE 1 Transponder.</p> <p>2000 - 2290 KAZAKOF (CODE 1) DEER (CODE 2) CHICK (CODE 6) DIA</p>
205 206	3/31	<p>Mainscheme, splits, development, $\frac{1}{2}$ shoreline on 10-2. Equipment worked well. Crossed baselines for system checks. Used ZODIAC-PICO & PICO-DEER to get check on ZODIAC-DEER pen. Excellent results - Very foggy & rainy today NMB</p>
210	3/31	<p>Da-1 High Speed Reader Fixed OK</p>
210 211	3/31	<p>22-m splits & shoreline in N-end of Kazakof Bay. Required extrapolating MiniRanger rates for the inshore ends of a few lines. Problems: 1. RK12 wouldn't read the tide tape so we ran without predicted tides 2. Air conditioning failed. 3. Plotter pen sometimes sticks in the down position</p>
		<p>crossed baselines from CHICK → KAZAKOF, DEER, & ZODIAC for system check. POS. NO. 2637-2907</p>
223 224	3/31	<p>Splits and development. Used DEER-CHICK & DEER-PICO to control work. Crossed baseline for system check. Equipment worked well.</p> <p>POS. NO. 2921-3162</p>



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

NOAA Ship DAVIDSON S331
1801 Fairview Avenue East
Seattle, Washington 98102

Ref: CPM331/101-3M
Ser 11-14

25 November 1981

Commanding Officer
U.S. Coast Guard District 17
Juneau, Alaska

This memo is to confirm radio messages 042000Z Nov 81 and 101700Z Nov 81 concerning hazards to navigation in Kazakof Bay and Ouzinkie Narrows, Alaska. Both areas and all hazards appear on Chart 16594. All depths are referenced to mean lower low water (MLLW).

Kazakof Bay

- | | | | |
|----|----------------|-----------------|-------------------|
| 1. | Lat. 58°06.9'N | Lon. 152°36.4'W | Depth 1.1 fathoms |
| 2. | Lat. 58°09.2'N | Lon. 152°35.6'W | Depth 2.5 fathoms |
| 3. | Lat. 58°10.3'N | Lon. 152°35.3'W | Depth 4.3 fathoms |
| 4. | Lat. 58°10.9'N | Lon. 152°35.0'W | Depth 3.4 fathoms |
| 5. | Lat. 58°10.8'N | Lon. 152°34.3'W | Depth 2.9 fathoms |

Ouzinkie Narrows

1. Rock covered 1.1 fathom at MLLW discovered, Latitude 57°54'48.0"N, Longitude 152°31'33.1"W, distance 0.7 nautical mile, bearing 280 degrees true from Prokoda Island Light 2.

N. C. Austin

N. C. Austin
CDR, NOAA
Commanding Officer

NCA:jaf



10TH ANNIVERSARY 1970-1980
National Oceanic and Atmospheric Administration

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tradition of service to the Nation

NAME OF AGENCY NATIONAL OCEAN SURVEY NOAA SHIP DAVIDSON	PRECEDENCE ACTION: INFO: TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input type="checkbox"/> MULTI-ADDRESS
ACCOUNTING CLASSIFICATION	
THIS BLOCK FOR USE OF COMMUNICATIONS UNIT	

CLASSIFICATION

STANDARD FORM 14 MARCH 1957
GENERAL SERVICES ADMINISTRATION
FPMR (41CFR) 101-35.306

TELEGRAPHIC MESSAGE

OFFICIAL BUSINESS
U. S. GOVERNMENT

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)

THIS COL. FOR AGENCY USE

FM NOAA DAVIDSON
TO CGD SEVENTEEN JUNEAU AK
INFO NOAACPM SEATTLE WA.

BT

THE FOLLOWING SHOAL FEATURES WERE INVESTIGATED DURING A RECENT SURVEY OF KAZAKOF BAY, ALASKA. THEY ARE CONSIDERED HAZARDOUS TO NAVIGATION, AND APPEAR ON CHART 16594.

1. LAT 58° 06.9' N LON 152° 36.4' W DEPTH 1.1 FATHOM
2. LAT 58° 09.2' N LON 152° 35.6' W DEPTH 2.5 FATHOM
3. LAT 58° 10.3' N LON 152° 35.3' W DEPTH 4.3 FATHOM
4. LAT 58° 10.9' N LON 152° 35.0' W DEPTH 3.4 FATHOM
5. LAT 58° 10.8' N LON 152° 34.3' W DEPTH 2.9 FATHOM

Depths are referenced to Mean Lower Low Water

PAGE NO. 1 NO. OF PAGES 1

NAME AND TITLE OF ORIGINATOR (Type) CDR N. C. AUSTIN	ORIGINATOR'S TEL. NO. 442-4450	DATE AND TIME PREPARED 11/4/81 0900
I certify that this message is official business, is not personal, and is in the interest of the Government. <i>N. C. Austin</i> (Signature)		

SECURITY CLASSIFICATION



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

NOAA Ship DAVIDSON S331
1801 Fairview Avenue East
Seattle, Washington 98102

Ref: CPM331/101-3A
Ser 12-4

DATE : 4 December 1981
TO : Director
National Ocean Survey
THRU : OA/CPM - C. K. Townsend
FROM : OA/CPM331 - N. C. Austin *N. C. Austin*
Commanding Officer, NOAA Ship DAVIDSON
SUBJECT: Dangers to Navigation Observed and Reported, 1981 Field Season

The following dangers to navigation have been reported to the Commanding Officer, District 17, U.S. Coast Guard.

A. Kazakof Bay, Alaska

1. $58^{\circ}06.9'N$, $152^{\circ}36.4'W$, Depth 1.1 fathoms.
Rocky shallows marked by kelp.
2. $58^{\circ}09.2'N$, $152^{\circ}35.6'W$, Depth 2.5 fathoms.
High point on rocky N-S oriented ridge.
3. $58^{\circ}10.3'N$, $152^{\circ}35.3'W$, Depth 4.3 fathoms.
High point on broken rocky bottom, marked by kelp.
4. $58^{\circ}10.9'N$, $152^{\circ}35.0'W$, Depth 3.4 fathoms.
Rocky shallow.
5. $58^{\circ}10.8'N$, $152^{\circ}34.3'W$, Depth 2.9 fathoms.
High point on slab-like ridge.

B. Ouzinkie Narrows, Alaska

1. $57^{\circ}54'48.0''N$, $152^{\circ}31'33.1''W$, Depth 1.1 fathoms.
High point and terminus of rocky ledge.

C. Rowan Bay, Alaska

1. $56^{\circ}38.1'N$, $134^{\circ}20.4'W$, Depth 4.7 fathoms.
Broken rocky ridge, approximately 90' x 120'.



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2. 56°37.6'N, 134°20.3'W, Depth 1.7 fathoms.
Rock pinnacle marked by kelp.
3. 56°37.7'N, 134°20.1'W, Depth 3.5 fathoms.
Flat-topped broken rock shelf.
4. 56°38.2'N, 134°18.4'W, Depth 3.0 fathoms.
Rock, approximately 40' diameter near top, marked by kelp.
5. 56°38.8'N, 134°18.1'W, Depth 3.2 fathoms.
Least depth obtained by lead line, no description.
6. 56°38.8'N, 134°17.7'W, Depth 3.1 fathoms.
Least depth obtained by lead line, no description.
7. 56°39.5'N, 134°16.3'W, Depth 4.5 fathoms.
Peak of rock ridge.
8. 56°39.4'N, 134°16.1'W, Depth 2.8 fathoms.
Elevated rocky area.
9. 56°39.2'N, 134°15.4'W, Depth 4.6 fathoms.
Elevated broken (rock) bottom.
10. 56°39.4'N, 134°15.2'W, Depth 3.9 fathoms.
Extended rocky shallow, approximately 20 m x 40 m.
11. 56°39.5'N, 134°14.9'W, Depth 3.4 fathoms.
Least depth on rock ridge.
12. 56°39.7'N, 134°14.9'W, Depth 2.0 fathoms.
Rounded rock pinnacle, approximately 50' diameter.
13. Log boom moored between 56°40.1'N, 134°14.8'W, and 56°40.3'N,
134°14.4'W.

NCA/DD:jf

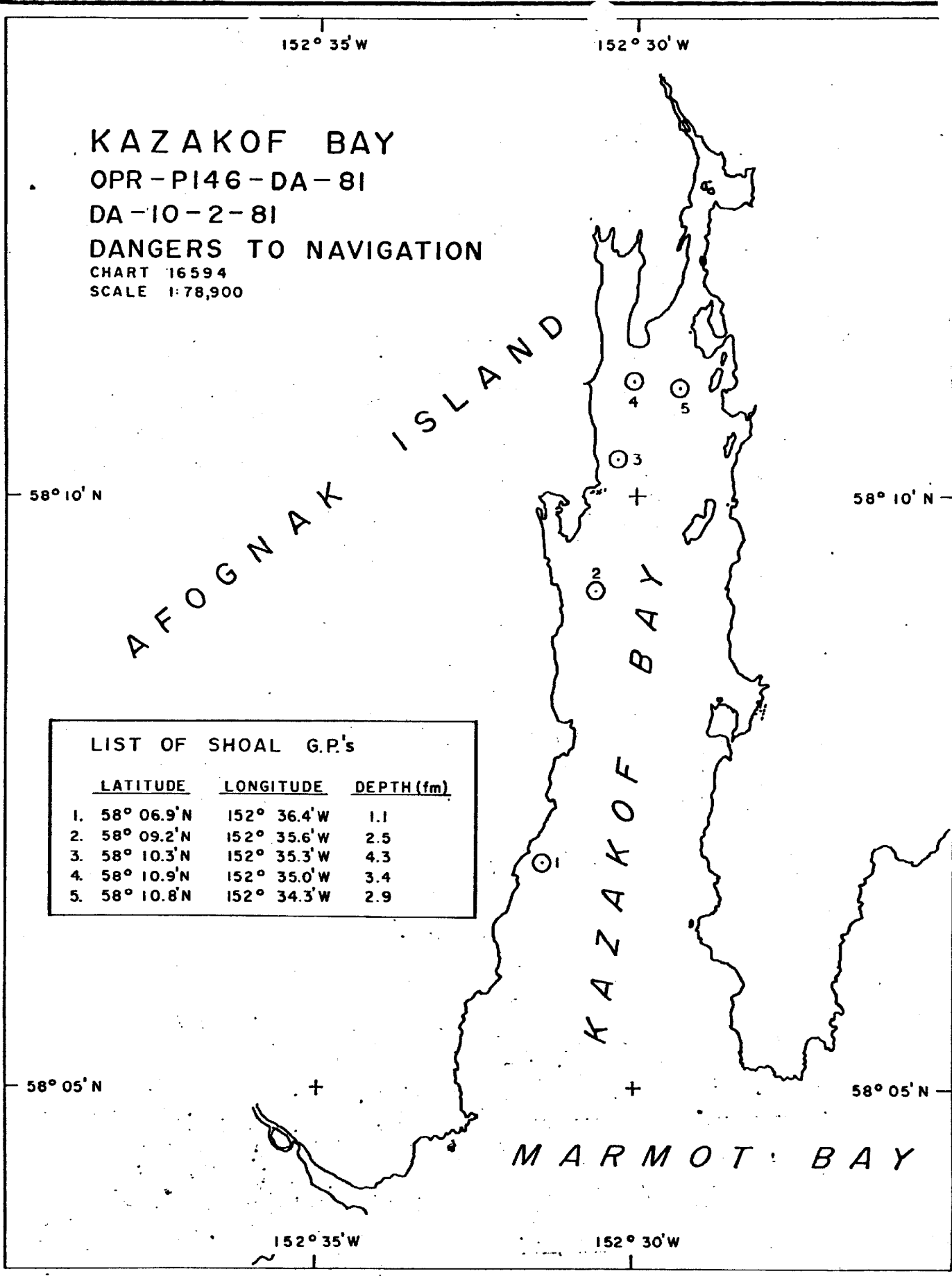
KAZAKOF BAY

OPR-PI46-DA-81

DA-10-2-81

DANGERS TO NAVIGATION

CHART 16594
SCALE 1:78,900



LIST OF SHOAL G.P.'s

<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH (fm)</u>
1. 58° 06.9' N	152° 36.4' W	1.1
2. 58° 09.2' N	152° 35.6' W	2.5
3. 58° 10.3' N	152° 35.3' W	4.3
4. 58° 10.9' N	152° 35.0' W	3.4
5. 58° 10.8' N	152° 34.3' W	2.9

SURVEY APPROVAL SHEET

- A. Amount and degree of personal supervision of field work and frequency of record and sheet inspection:

Supervision of personnel and inspection of sheets and field records were accomplished on a daily basis through the Executive Officer and Field Operations Officer. The Commanding Officer inspected sheets daily and field records, periodically.

- B. State whether the survey is complete and adequate or if additional field work is recommended.

The survey is complete and adequate. No additional field work is recommended.

- C. Cite additional information or references that may be of assistance for verifying and reviewing the survey:

See "Reference to Reports" in the Descriptive Report.

- D. Signed statement of approval of the field sheet and all accompanying records:

Date: 10/21/81

Approved and forwarded by:

N. C. Austin

N. C. Austin
CDR, NOAA
Commanding Officer

HYDROGRAPHIC SURVEY STATISTICS

H-9957

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	1
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. ARC, EXCESS	7

DESCRIP-TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						
CAHIERS			2 - raw			
VOLUMES						
BOXES			3 - Sm Vols. 1 - smooth			

T-SHEET PRINTS (List) TP-00029, TP-00303 (Enlargement - 1 each)

SPECIAL REPORTS (List)

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	PRE-VERIFICATION	VERIFICATION	TOTALS
POSITIONS ON SHEET			
POSITIONS CHECKED		3119	3119
POSITIONS REVISED		4081	4081
SOUNDINGS REVISED		363	363
SOUNDINGS ERRONEOUSLY SPACED		0	0
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED		0	0

PROCESSING ACTIVITY	TIME - HOURS		
	PRE-VERIFICATION	VERIFICATION	TOTALS
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	9	* (VER)/(EVAL)	9
VERIFICATION OF CONTROL		02/08	10
VERIFICATION OF POSITIONS		84/10	94
VERIFICATION OF SOUNDINGS		298/17	315
COMPILATION OF SMOOTH SHEET		43/12	55
APPLICATION OF TOPOGRAPHY		15/00	15
APPLICATION OF PHOTOBATHYMETRY		00/00	00
JUNCTIONS		NA/01	01
COMPARISON WITH PRIOR SURVEYS & CHARTS		00/18	18
VERIFIER'S REPORT		01/30	31
OTHER		00/02	02
TOTALS	9	443/98	550

Pre-Verification by James S. Green	Beginning Date 2/10/82	Ending Date 2/10/82
Verification by Richard A. Shipley	Beginning Date 4/26/82	Ending Date 3/28/83
Evaluation by Gordon E. Kay	7/11/83	8/3/83
Verification Check by James L. Stringham, James S. Green	Time (Hours) 55	Date 8/8/83
Marine Center Inspection by HIT	Time (Hours) 7	Date 8/29/83
Quality Control Inspection by	Time (Hours)	Date
Requirements Evaluation by	Time (Hours)	Date

* Time in this column is for Verification (VER) and Evaluation (EVAL)

PACIFIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO: H-9957

FIELD NO: DA-10-2-81

Alaska, Afognak Island, Kazakof Bay

SURVEYED: July 21 - September 3, 1981

SCALE: 1:10,000

PROJECT NO: OPR-P146-DA,
FA-81

SOUNDINGS: Ross Fineline
Raytheon 719

CONTROL: Mini-Ranger
Range/Range
Range/Azimuth
See Boatsheet Method

Chief of Party.....CDR Ned C. Austin

Surveyed By.....LT D.A. Dreves
LTJG N. Bogue
LTJG S. Konrad
LTJG D. Actor

Automated Plot By.....PMC Xynetics Plotter

Verified By.....Richard A. Shipley

Evaluated By.....Gordon E. Kay

1. INTRODUCTION

H-9957 is a basic hydrographic survey conducted by the NOAA Ship DAVIDSON in accordance with the following:

Project Instructions OPR-P146-DA, FA-81, Shelikof Straits, Alaska,
dated February 6, 1981
Change No. 1, April 15, 1981
Change No. 2, May 6, 1981

This survey is situated in Kazakof Bay (referred to as Danger Bay by local fishermen) on the south side of Afognak Island and extends from the head of Kazakof Bay southward seven miles into Marmot Bay. The area is heavily wooded with trees extending downward to the rocky shoreline.

During the verification/evaluation, the following data was changed:

- a. Projection parameters were changed to center the hydrography on the smooth sheet and to change the projection to polyconic.
- b. List of stations has been adjusted to reflect preliminary adjusted field positions and names to be consistent with the National Geodetic Service (NOS) listing.

c. Tide level values used on H-9957 are from observed tides (see 77-12 on the following separate).

d. The TC/TI table has been amended to handle lead line soundings.

The digital records for this survey have been updated to include all categories of information required to comply with N/CG letter, Policy of Certification and Delivery of Hydrographic Surveys, December 17, 1982. Certain descriptive information, however, may not be included 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

Horizontal control and hydrographic positioning are discussed in paragraphs F and G of the Ship's Descriptive Report and in the Electronic and Horizontal Control Report of OPR-P114-DA-81, H-9957 (DA-10-2-81), but with the following exception:

Problems were encountered during verification of three control stations and the associated sounding data obtained from them. These stations were located by less than Third Order Class I positioning and utilized Motorola Mini-Ranger III, range azimuth control for hydrography. The stations and how they were located are as follows:

<u>Station Name</u>	<u>Station Number</u>	<u>Carto Code</u>	<u>Located by</u>
Pass Point	43	243	photogrammetrically
Islet	42	253	aerial photo (spotted)
Doc	41	253	meaned Mini-Ranger rates

The Photogrammetry Section was consulted in an attempt to calculate and determine the G.P.'s on the above stations as recommended in paragraph 5 of the ship's Descriptive Report. But due to either inadequate photo identification or inadequate ground location from the photos, coupled with the large differences in photo to survey scale it was not possible to improve the accuracy of stations Pass Point or Islet (see CPM33 letter dated April 21, 1982, appended). Consequently, hydrography gathered using the above stations (stations 43, 42) does not meet the Hydrographic Manual accuracy requirements.

Station Doc (41) was located by acquiring Mini-Ranger rates on detached positions, meaning the rates along with a taped distance. Again, here the hydrography gathered does not meet the Hydrographic Manual accuracy requirements.

These above stations were used to gather hydrographic data in two areas and are centered at the following:

<u>Area</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Station(s)</u>
1	58°12'36"N	152°33'30"W	Islet (42) Pass Point (43)
2	58°08'15"N	152°33'15"W	Doc (41)

Area 1 is a cove at the extreme northern end of Kazokof Bay. Sounding data ranges from the zero fathom curve to approximately 1.6 fathoms deep. This area is not readily accessible to traffic or commerce due to a narrow passage way leading back into the cove. Consequently, the questionable positioning of hydrographic data poses no danger to navigation.

Area 2 is located in a small cove which contains the Afognak Logging Camp Wharf. This area is subject to a considerable amount of traffic in and out of the logging camp wharf. Sounding data ranges from the zero fathom curve to approximately 15 fathoms. The data obtained from Doc does blend in with data obtained from other stations, but the positioning of said sounding data is substandard (see section 9 of this report).

The smooth sheet was plotted using preliminary adjusted field positions on the North America Datum of 1927.

The shoreline comes from the following unreviewed manuscripts:

<u>Number</u>	<u>Class</u>	<u>Scale</u>	<u>Date of Photography</u>	<u>Date of Field Edit</u>
TP-00297	Class I	1:20,000	July 1971	July 1981
TP-00303	Class III	1:20,000	July 1971	July 1981

Field edit for the area of hydrography has been applied to TP-00303; therefore, information from this manuscript is shown in black ink on the smooth sheet.

One reef and rock were transferred from the field sheet onto the smooth sheet without supporting positional information at latitude 58°10'39"N, longitude 152°34'15"W.

3. HYDROGRAPHY

Soundings at crosslines are in very good agreement. The hydrography contained within this survey, H-9957, is adequate to determine the bottom configuration and least depths, with the exception of the areas listed in section 9 of this report.

Standard depth contours were adequately drawn and developed with the exception of the 0-fathom contour, where hydrography was terminated due to the rocky shoreline.

4. CONDITION OF SURVEY

The hydrographic records and final reports adequately conform to the requirements of the Hydrographic Manual, July 4, 1976 edition, but with the following exceptions:

a. Numerous areas on the final (1:10,000) field sheet were not legible due to the excessive overprinting (plotting) of survey data. The obliteration of data lowers the usefulness and overall quality of the survey work.

"legibility of the final field sheet is important.", page Q-2 paragraph A of the Operations Order.

b. Three peaks that were located on the main scheme line needed further investigation. Presently these shoal depths raise from the surrounding depths by at least 40% change in depth. They are located as follows:

<u>Present Depth</u>	<u>Surrounding Area</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Position Number</u>
25 fathom	41 fathom	58°09'16.86"N	152°35'03.39"W	4473/3
29 fathom	49 fathom	58°08'59.49"N	152°34'31.07"W	4455/3
30 fathom	45 fathom	58°08'30.36"N	152°34'29.11"W	4427/5

"At any depth in excess of 20 fathoms, all shoals indication rising more than 10% above the general surrounding depths should be investigated." Section 1.4.3.1., Hydrographic Manual.

c. Inspection of the raw records indicates that some or part of the original sounding volumes were re-written. This copying over of the original work was performed to "pretty up" the volume or to reject substandard work. While it does accomplish this, valuable data can be lost or errors can develop, which lowers the overall survey quality.

"Recorded data must never be erased...entries rejected for any reason are indicated by an "R" written boldly over the entry." Section 4.8.3.1., paragraph 11, Hydrographic Manual.

d. A shoal was discovered while running main scheme lines (Position No. 5417/3) at latitude 58°10'10.41"N, longitude 152°33'37.28"W with a reduced depth of 1.0 fathom. This feature, which is located 150 meters from the east shore should have been investigated more thoroughly (with a split or dive investigation) to ascertain its composition (a possible covered rock) and its least depth.

"A more intensive examination of the shoalest part of the feature should be made to obtain the least depth." Hydrographic Manual section 4.5.9.2.

e. On a more positive note, this evaluator feels that the author of the Descriptive Report deserves recognition for producing an outstanding and well written narrative on H-9957.

5. JUNCTIONS

There are no junctioning contemporary surveys around the area limits of H-9957, nor were any other junctions required by the Project Instructions, OPR-P146-DA, FA-81, paragraph 6.9.

6. COMPARISON WITH PRIOR SURVEYS

H-9957 was compared with H-3014 1:20,000 (1909). The two surveys compare well. Differences vary in magnitude from one to two fathoms shoaler than the

present survey to one to two fathom deeper. Differences are attributed to scale, datum, and data acquisition technique.

There were two dashed Pre-Survey Review areas on H-9957 and both are adequately disposed of in paragraph K of the Ships Descriptive Report.

See the ships Descriptive Report, paragraph K, for discussion and disposition of rocks appearing on H-3014 which were investigated by the field editor or the hydrographer.

There are two features found on the prior, but the present survey could not locate them either photogrammetrically or by the field editor. Their existence is doubtful. They are located as follows:

<u>Feature</u>	<u>Latitude N</u>	<u>Longitude W</u>
islet	58°09'46"	152°33'32"
rock	58°11'54"	152°34'05"

The present survey H-9957 should supersede H-3014 over their common areas.

7. COMPARISON WITH CHART

H-9957 was compared to Chart 16594, 10th Edition, July 4, 1981, 1:78,900.

a. Hydrography - Charted information comes from the before mentioned prior survey H-3014. Differences range ±1 to ±2 fathom around present survey depths. There are two features found on the chart that come from an unknown source. The present survey could not locate them either photogrammetrically or by the field editor. They are located as follows:

<u>Feature</u>	<u>Latitude N</u>	<u>Longitude W</u>
islet	58°09'32"	152°33'29"
rock	58°11'34"	152°34'31"

The source of these features should be reviewed and if valid retained on the chart. For a complete rock comparison see the ship's Descriptive Report, paragraph K. H-9957 is adequate to supersede chart 16594 over their common areas.

b. Controlling depths - There are no controlling depths contained within the limits of H-9957.

c. Aids to navigation - There are no fixed aids or floating aids to navigation contained within the limits of H-9957.

8. COMPLIANCE WITH INSTRUCTIONS

H-9957 adequately complies with the project instructions and amendments listed in section 1 of this report, but with the exception of paragraph 3.2.3 of said instructions. This paragraph references to use Third-order, Class I accuracy standards (or better). See section 2 of this report.

9. ADDITIONAL FIELD WORK

H-9957 is a fair hydrographic survey, but additional work is needed (as discussed in sections 2 and 4 of this report). Additional work is listed below.

a. A re-survey of the un-named cove (Area 2, as per section 4 of this report), in front of the Afognak Logging Camp Wharf. This area was surveyed with substandard horizontal control. The area is located east of a line formed by these two points.

<u>Point</u>	<u>Latitude</u>	<u>Longitude</u>
1	58°08'15"N	152°33'48"W
2	50°08'42"N	152°33'30"W

b. A further investigation is needed of three shoals (as per section 4 of this report) to determine least depths. They are located as follows:

<u>Depth (fathoms)</u>	<u>Latitude</u>	<u>Longitude</u>
25	58°09'16.86"N	152°35'03.39"W
29	58°08'59.49"N	152°34'31.07"W
30	58°08'30.36"N	152°34'29.11"W

Submitted by

Gordon E. Kay

Gordon E. Kay
Cartographer

This survey has been verified, evaluated, and quality control reviewed. I have examined the survey and it meets Charting and Geodetic Services standards and requirements for use in nautical charting except as noted above in the Evaluation Report. This survey, H-9957, is recommended for approval.

James S. Green

James S. Green
Supervisory Cartographer

DATE: April 7, 1982

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 945-7314 Kazakof Bay, AK

Period: July 21-September 2, 1981

HYDROGRAPHIC SHEET: H-9957

OPR: P146

Locality: Kazakof Bay, Alaska

6/29-7/26/81 at 1700 hrs. = 8.4 ft.
Plane of reference (mean lower low water): 7/26/81 at 1800 hrs.-9/3/81 = 8.3 ft.

Height of Mean High Water above Plane of Reference is 8.4 ft.

REMARKS: Zone Direct.


Chief, Tidal Datums and Information Branch

40'

35'

152°30'

Marmot Bay and Kupreanof Strait

SOUNDINGS IN FATHOMS - SCALE 1:78,900

KUPREANOF STRAIT

10th Ed., July 4/81

16594

H-3014(1979)

result of the earthquake
Tidal observations sin
Kodiak and -3.7 feet
Mariners are urged to
when navigating in the
the magnitude of chan
sites is not known.

LOCAL MAGNETIC
Differences of as m
normal variation have
Kupreanof Strait about
Raspberry Cape

WARN
The prudent mariner
on any single aid to navi
floating aids. See U.S. C
and U.S. Coast Pilot fo

MS
TER

G N A K I

ON
referred to datum of soundings (MLLW)

Mean High Water Level	Mean Tide Level	Mean Lower Low Water	Extreme Low Water
feet	feet	feet	feet
4.3	4.3	0.0	-4.0
4.6	4.6	0.0	-4.0
4.5	4.5	0.0	-4.0
5.2	5.2	0.0	-4.0
7.6	7.6	0.0	-4.5
7.6	7.6	0.0	-4.5

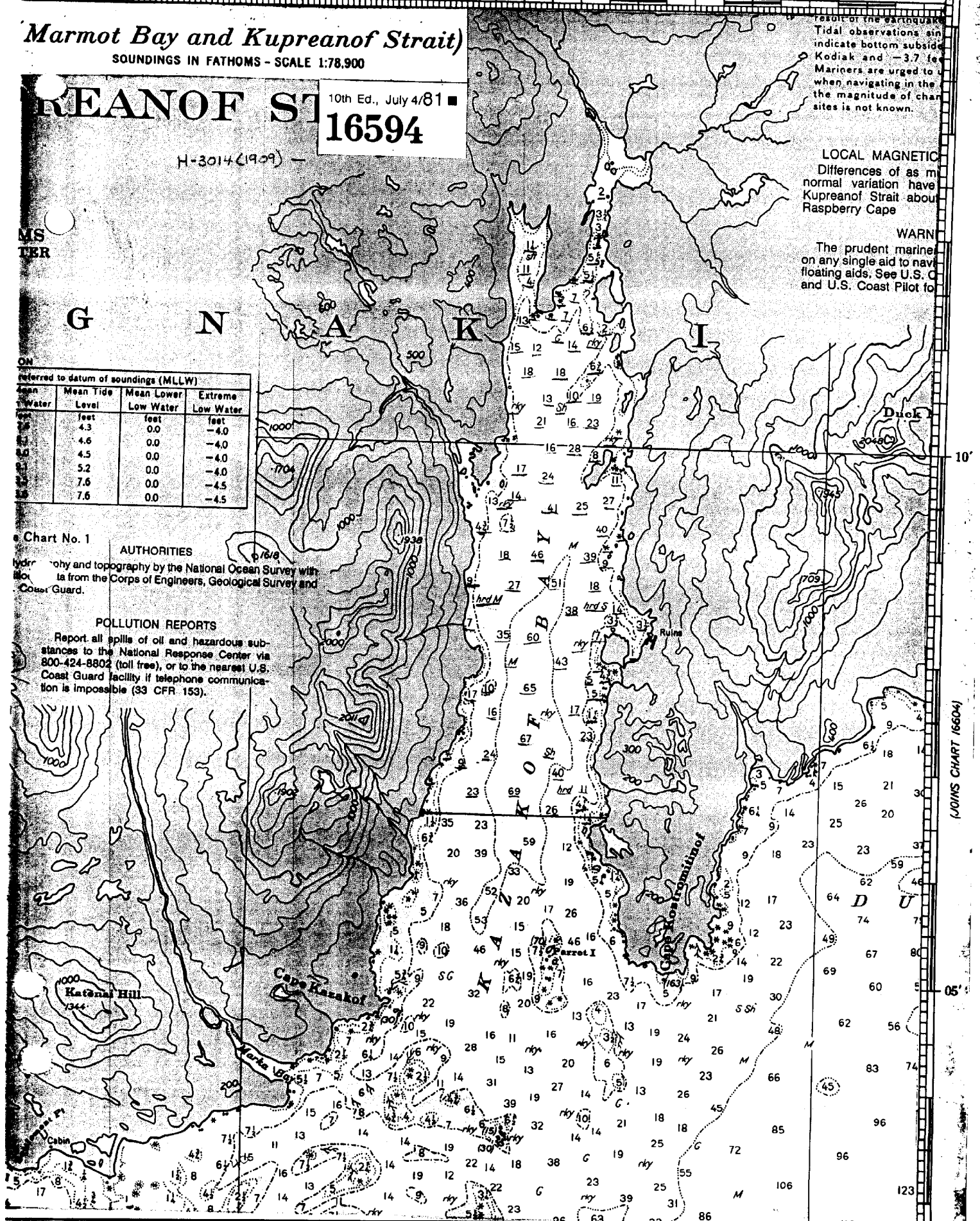
Chart No. 1

AUTHORITIES

Hydrography and topography by the National Ocean Survey with
data from the Corps of Engineers, Geological Survey and
Coast Guard.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via
800-424-8802 (toll free), or to the nearest U.S.
Coast Guard facility if telephone communication
is impossible (33 CFR 153).



(JOINS CHART 16504)

C32-C

JIM:

JIM MASSEY RE WROTE
PAGE TWO. ALTHOUGH THE
CONTROL STATION IS SET (TANG)
IS NOT VERIFIED IT PROBABLY
IS OKAY. IT DOES NOT
MEET POSITION ACCURACY
REQUIREMENTS BUT CONSIDERING
THE REMOTENESS OF THE
AREA OF THE BAY AND THE
DEPTH OF WATER THE DATA
MAY BE OKAY. 10-20 METER
POSITIONAL ERRORS ARE PROBABLE

Bill



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Pacific Marine Center
1801 Fairview Avenue East
Seattle, Washington 98102

April 21, 1982

TO: CPM32C - James Stringham

FROM: CPM33 - *James W. Massey*
James Massey

SUBJECT: Control for OPR-P146-DA,FA-81 H-9957

The control used to run range-azimuth hydrography in shallow areas of the northern reaches of Kazakof Bay by NOAA Ship DAVIDSON during the 1981 field season was researched using all available data supplied as part of the field edit records and hydrographic records. Following is a summary of the conclusions drawn as they pertain to Photogrammetric requirements. Suitability for hydrography data requirements should be evaluated separately by the Verification Branch.

Pass Point, 1981 (Temp) was used as the initial pointing object for range-azimuth hydrography. This point was selected as a hydrographic support point. The purpose of these points are to allow the accurate orientation of ratioed photographs to shoreline maps, hence, location of signals by radial line plots for use in running visual hydrography or sextant fixes. The original selection of this point had no requirement that it be recoverable on location. The point was positioned by the stereo-compiler and as such meets the accuracy standards for well defined points. The accuracy of the point plotted on the shoreline map is .5mm at 1:20,000 scale or approximately 10 meters. The ability of the hydrographer to recover and initial on the same point the stereo-compiler positioned is a matter open to debate. The positioned feature plotted on the shoreline map by the stereo-compiler was scaled and the following position in latitude and longitude determined:

(Pass Point, 1981 (Temp), 58°12'40.50" latitude; 152°33'15.36" longitude)
Values presented by the hydrographer were 58°12'40.380" latitude and 152°33'15.600" longitude. The differences between the two are computed to be 4.6 meters in latitude and 3.6 meters in longitude. Considering 1 second of latitude equals 30.940 meters and 1 second of longitude equals 16.332 meters, and the 1:20,000 scale shoreline map, the differences are negligible; however, the Verification Branch may want to consider the differences in verification of the hydrographic data.

Islet 1981, (Temp) was the head of a 6" Lag Bolt driven into the ground on a small island appearing on photographs NOS 5 Jul 71E 6149 and 6150. This point was occupied for running range-azimuth hydrography. The islet



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also appears on NOS 4 Jul-71E 6097 thru 6099; however, these photograph centers are not plotted on the shoreline map and therefore are of limited value to the hydrographer. A sketch indicating the approximate location of the Islet and Station was provided in the sounding volume for OPR-P146-DA,FA-81, H-9957 on page 51. All photography was researched and the following conclusions drawn:

A. No image was identified by the hydrographer on any of the photographs.

B. Dead trees referenced in the sketch could not be identified on the photography using 10X magnification.

C. Measurements given in the sketch are not useable at 1:20,000 scale due to the limited information given and the unidentifiable features used as reference points.

As stated previously, station ISLET, 1981 (Temp) was generally described in the sounding volume for OPR-P146-DA,FA-81, H-9957 on page 51. It was stated the position determined by the Hydrographic Survey Ship was developed through Radial Line Techniques. I could find no evidence of this procedure nor was a signal overlay provided. The hydrographer's sketch makes reference to the fact that the Islet used appears on photograph NOS 5 JUL 71E 6150. By the above referenced photograph and sketch comparisons, the islet thought to have been used was compiled by the stereo-compiler. It is approximately 1mm in diameter at the scale of the Shoreline Map or 1:20,000 scale. A point was arbitrarily selected on that islet, using the sketch data as reference material. The point selected was scaled and a geographical position determined. This position compared favorably with the position submitted by the hydrographic survey vessel at 1:20,000 scale. It must be emphasized that this procedure does not confirm the position of station Islet, 1981 (Temp) or verify the field determined coordinates. The conclusion drawn is that the position of station Islet, 1981 (Temp) at 58°12'40.26" Latitude and 152°33'52.20" Longitude as determined by the Hydrographic Survey Ship cannot be verified.

ATTACHMENT TO DESCRIPTIVE REPORT FOR H-9957


I have reviewed the smooth sheet, accompanying data, and reports of this hydrographic survey. Except as noted in the Evaluation Report, the hydrographic survey meets or exceeds Charting and Geodetic Services (C&GS) standards, complies with instructions, and is accurately and completely represented by the smooth sheet and digital data file for use in nautical charting.

 4/21/83
Chief, Nautical Chart Branch (Date)

CLEARANCE:

N/MOP2:RLSandquist

SIGNATURE AND DATE:

 4/21/83

After review of the smooth sheet and accompanying reports, I hereby certify this survey is accurate, complete, and meets appropriate standards with only the exceptions as noted above. The above recommendations are forwarded with my concurrence.

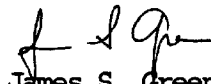
 4/21/83
Director, Pacific Marine Center (Date)

ADDENDUM TO EVALUATION REPORT FOR H-9957

Paragraph 7.c, Aids to Navigation, is supplemented by the following:

Aids to navigation shown in the control file have been updated from field positions to preliminary adjusted positions. The Form 76-40, NonFloating Aids or Landmarks for Charts, for Hog Island Light should be updated to reflect this improved position.

Respectfully submitted,



James S. Green
Supervisory Cartographer
November 16, 1983

APPROVED:



Ned C. Austin
Chief, Nautical Chart Branch

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

Hydrographic Index No. 116E

INDEX
HYDROGRAPHIC SURVEYS
Complete through May 1969
1942-1965
SHELIKOF STRAIT
ALASKA
HYDROGRAPHIC SURVEYS

No.	Date	Scale
H-6758A	1942	10,000
H-6892A	1942	600
F. E. No. 5	1944	20,000
F. E. No. 6	1947	20,000
F. E. No. 3	1948-49	20,000
H-7195	1947	20,000
H-7196	1947	40,000
H-7197	1947	40,000
H-7812	1949	40,000
H-7822	1949	10,000
H-7814	1950	5,000
F. E. No. 7	1954	10,000
H-8118	1954	10,000
H-8134	1955	5,000
H-8130	1955	5,000
H-8131 (3 areas)	1955	40,000
H-8142	1955	40,000
H-8143	1955	40,000

On Scale of: } 10,000 6.24 inches = 1 statute mile
 } 20,000 3.17 inches = 1 statute mile
 Δ Wire Diag

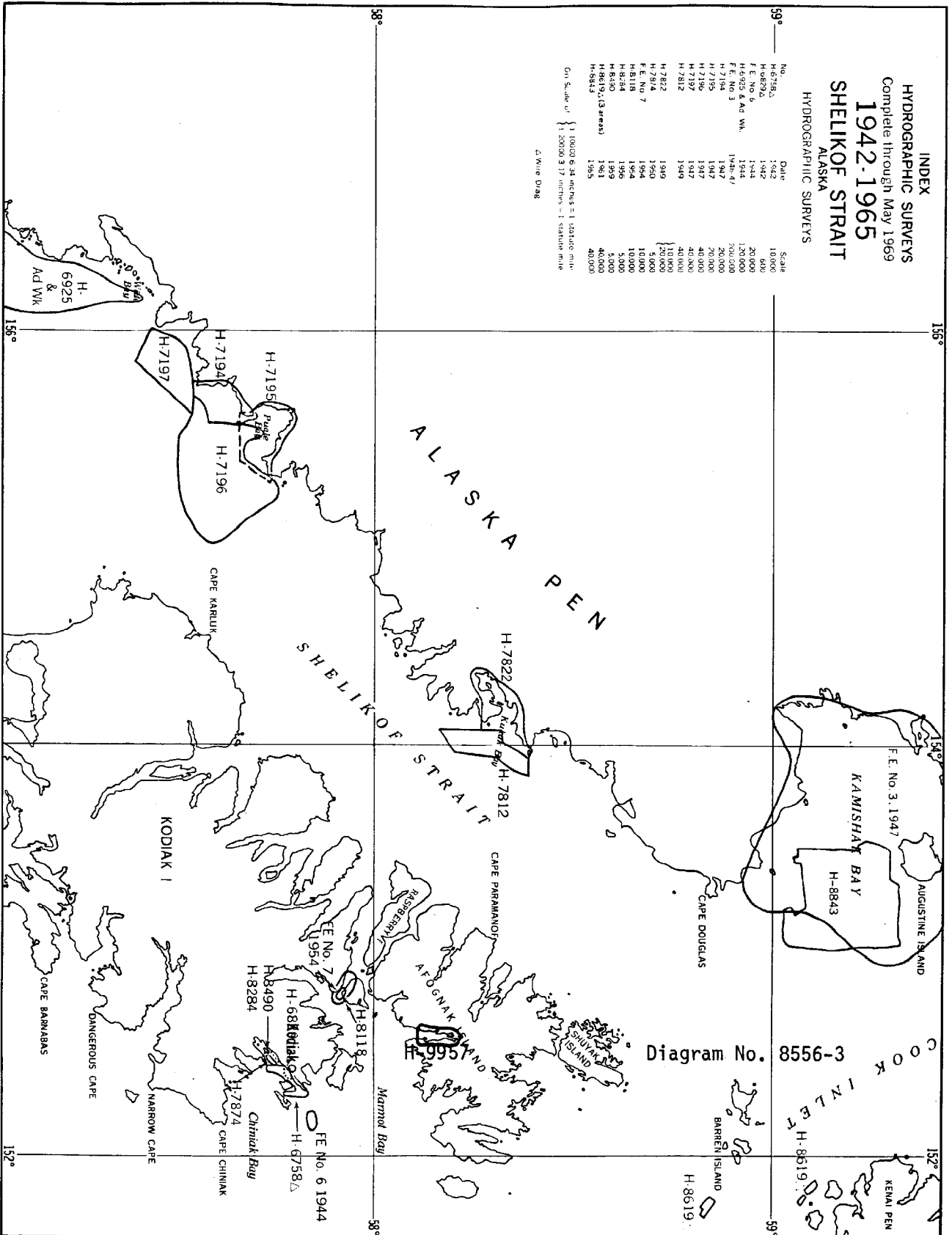


Diagram No. 8556-3

