9949

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-10-1-81

Office No. H-9949

LOCALITY

State Alaska

General Locality Marmot Bay

Locality Whale Passage and Vicinity

1981

CHIEF OF PARTY
CDR N.C. Austin

LIBRARY & ARCHIVES

DATE November 22, 1983

☆U.S. GOV. PRINTING OFFICE: 1980—768-230

AREA 6
CHARTS
16594
16589
531

NOAA FORM 77-28 (11-72)

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

REGISTER NO.

H-9949

HYDROGRAPHIC TITLE SHEET

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-10-1-81

State Alaska

General locality Marmot Bay

Locality Whale Passage and Vicinity

Scale 1:10,000 Date of survey June 14 - July 30, 1981

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

Vessel NOAA Ship DAVIDSON (3130) and Launches 3131, 3132

Chief of party CDR Ned C. Austin

Surveyed by LCDR D. R. Seidel, LT D. A. Dreves, LTJG D. Actor, LTJG D. Herlihy

Soundings taken by echo sounder, hand lead, pole Ross Fineline, Model 5000

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Verification ~~Protracted~~ by Charles R. Davies Automated plot by PMC Xynetics Plotter

Evaluation ~~Verification~~ by Gordon E. Kay

Soundings in fathoms ~~feet~~ at ~~XXXX~~ MLLW

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

STANDARDS CK'D 11-23-83

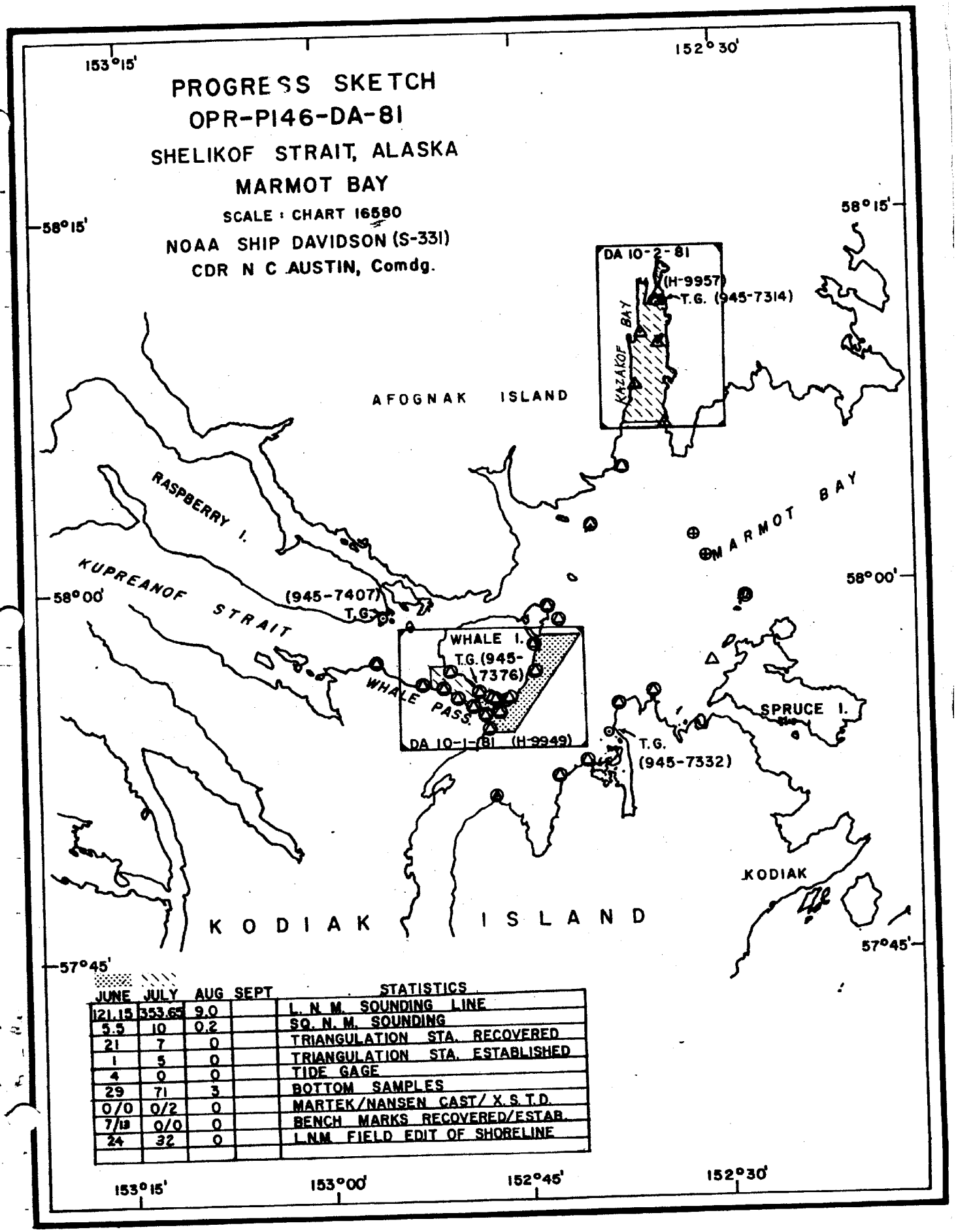
C, LOY

NOAA Checked 12/12/83 SW

Notes in pencil added during Examination of survey. SEB

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

☆ U. S. GOVERNMENT PRINTING OFFICE: 1976—665-661/1222 REGION NO. 6



JUNE	JULY	AUG	SEPT	STATISTICS
121.15	353.65	9.0		L. N. M. SOUNDING LINE
5.5	10	0.2		SQ. 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.
7/13	0/0	0		BENCH MARKS RECOVERED/ESTAB.
24	32	0		L.N.M. FIELD EDIT OF SHORELINE

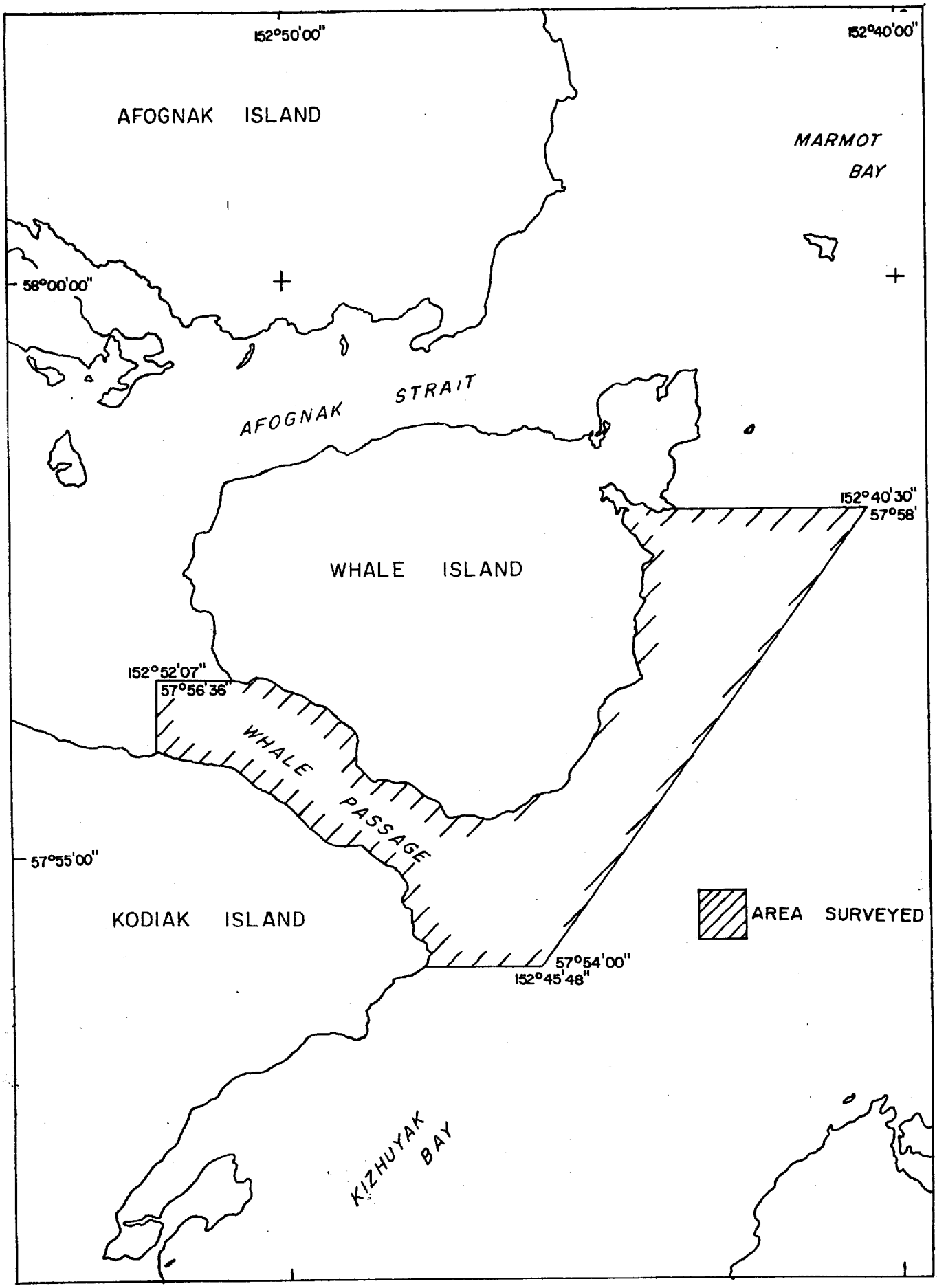


CHART NO 16594 SCALE 1:78,900

DESCRIPTIVE REPORT
H-9949
OPR-P146-DA-81
MARMOT BAY, ALASKA

A. PROJECT

Survey operations were conducted in accordance with Project Instructions OPR P146-DA, FA-81, dated February 6, 1981, Change No. 1 dated April 15, 1981, and Change No. 2 dated May 6, 1981. Registry No. H-9949 was assigned on 26 June 1981. Operations commenced on June 14, 1981 (JD 165) and completed on August 8, 1981 (JD 220).

B. AREA SURVEYED

This survey covers Whale Passage, a short, narrow strait between Kodiak and Whale Islands. The area boundaries are indicated on the appended sketch. Whale Passage is a major traffic route to Shelikof Strait from Marmot Bay. Except for slack water, the strong current and uneven bottom characteristics produce whirlpools and upwellings which make navigation hazardous. Bottom characteristics in Whale Passage and the offshore area are predominately rocky, with some sand.

C. SOUNDING VESSEL

Sounding vessels were launch DA-1 (3131) and DA-2 (3132). Raw data records and preliminary plots for DA-1 were made in red ink, and blue ink was used for DA-2.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

Both launches were equipped with Ross 5000 Fineline Fathometers for recording all depths. Sounding equipment serial numbers were as follows:

Launch	Fathometer	Digitizer	Transceiver
DA-1 (3131)	1048	1081	1081
DA-2 (3132)	1080	1048	1077

Daily phase calibrations were conducted at 10 fathom intervals to 100 fathoms. Fathometers were monitored continuously during survey operations to keep the initial at zero, and to keep the phase calibration setting correct at mid-scale.

The fathograms were scanned after each day's hydrography, and digitized values compared to the analog record. Missed depths, digitizer errors, and peak/deep insertions were corrected and selected from the fathogram trace. Changes were entered on the edited master

tape or via the corrector tape.

A preliminary transducer depth correction (TRA) was determined via daily bar checks to be 0.3 fathoms for both launches. This value was used in all field plots and on the TC/TI tape. Settlement and squat were determined to be 0.1 fathom or less for all speeds used during the survey. It was not applied to field data. For further information see appended Corrections to Echo Soundings Report. ✓

Velocity corrections were determined from Nansen cast data. The cast was conducted on July 1, 1981 at 58°01'06"N, 152°31'00"W. Velocity corrections were not applied to final field sheet depths. ✓

Tide correctors were calculated from predicted high and low waters for Kodiak, Alaska and corrected to Kizhuyak Point, Kodiak Island, and Uzkosti Point, Whale Island. Correctors were computed via AM 500 at 0.2 fathom intervals and were applied to preliminary and final field sounding plots. No tidal zoning was applied. ✓

Actual tide data were recorded by bubbler tide gages at Uzkosti Point in Whale Passage, Nachalni Island in Kupreanof Straits, and near Kizhuyak Point in Marmot Bay. The Kodiak reference gage was reported inoperative during the interval July 1 through July 17, 1981 (JD 182 - 198). Tide reducers for this period will have to be derived from the Seldovia reference station and the field gages referenced above. A Field Tide Note is appended. ✓

E. HYDROGRAPHIC SHEETS

Field sheets were prepared at a scale of 1:10000 using the DAVIDSON's PDP 8/e Complot system and standard NOS software. Due to plotter limitations the field sheet was divided into two sections, referred to as DA-10-1A-81, including all of Whale Passage, and DA-10-1B-81 which includes the eastern side of Whale Island. Four 1:5000 blow-ups and one 1:2500 blow-up were prepared to relieve sounding congestion in development and presurvey review areas. In these areas only the shoalest soundings are presented on the final field sheet. All data was transferred to PMC Processing Division for verification. ✓

F. CONTROL STATIONS

The survey datum for horizontal control is NAD 1927. Twenty-three existing third order control stations were recovered for hydrographic control. In addition, one disk monumented station and one temporary station were established using third order methods. Fifteen stations were used as Miniranger sites, and eleven were used in conjunction with visual calibration signals. Station positions are included in the appended signal list. Stations and their uses are as follows: ✓

Station	Used for:
KIZ 1933	Miniranger Station, Calibration Signal
CRAG 1933	Calibration Signal
SHAG 1954	Miniranger Station, Calibration Signal
HALE 1954	Miniranger Station, Calibration Signal
SAGE 1954	Miniranger Station, Calibration Signal
KRAD 1954	Miniranger Station
BARON RM1 1954	Miniranger Station
KONIUJI IS. LT. "5" 1981 ECC	Miniranger Station
UZKOS 1954	Miniranger Station
YUZ 1954	Miniranger Station, Calibration Signal
ILKOGNAK ROCK LIGHT 1954 ECC	Miniranger Station, Calibration Signal
VOL 1907	Miniranger Station, Calibration Signal
SWIFT 1933	Miniranger Station, Calibration Signal
MAN 2 1933	Miniranger Station, Calibration Signal
ARCH 1981	Miniranger Station, Range-Azimuth
BUOY 1981 (Temp. Point)	Miniranger Station, Range-Azimuth
WHALE PASSAGE DAY BEACON #4	Calibration Signal

A Horizontal Control Report is appended.

G. HYDROGRAPHIC POSITION CONTROL

The Motorola Miniranger III system was used for range-range and range-azimuth operations. Transponders were deployed as indicated in Section F, and mounted directly above the station on a visual signal or survey tripod. Power was supplied by two 12 volt, 60 amp./hr lead-acid storage batteries connected in series to provide the required voltage. Equipment serial numbers follow:

Vessel	Julian Date	Console/R-T Unit
DA-1	165 - 197	710/721
DA-2	165 - 181	707/719
DA-2	189 - 197	716/709

Transponders

Code	SN
1	723
2	772
3	773
4	771
5	911711
6	911723

Wild T-2 Theodolite SN 67872 was used for all range-azimuth operations.

Baseline calibrations were conducted on June 11 (JD 162), July 6 (JD 187), and July 30 (JD 211). A maximum drift of 3 m was observed. Baseline correctors are as follows:

Console/R-T Unit	Code	June 11/JD 162	July 6/JD 187	July 30/JD 211
707/719	1		-3	-4
	2	+1	~~+1~~ 0	+2
	3	+1	+3	+3
	4	-1	-1	0
	5	+1	-2	+1
	6	+1	~~+1~~ 0	+1

Console/R-T Unit	Code	June 11/JD 162	July 6/JD 187	July 30/JD 211
710/721	1		~~-3~~ -2	0
	2	+3	+4	+3
	~~3~~ 12	0	-2	-2
	4	+2	+1	+2
	5	-1	-1	-2
	6	0	0	~~-1~~ 0
716/709	1		+1	0
	2	+2	~~+20~~	+4
	3	0	-2	-2
	4	0	+1	-1
	5	0	-2	-1
	6	0	-2	0

Pre-operations baseline correctors were applied during preliminary field sheet plotting. The final field sheet was plotted using meaned corrector values from baseline calibrations which preceded and succeeded hydrography. Corrector tapes submitted to PMC incorporate the mean corrector values.

Daily Miniranger system checks bracketed each day's hydrography, weather permitting. Initially the standard three-point sextant fix with check angle method via the PDP/8e computer and RK 561 was used. Excessive daily corrector values (as great as eleven meters) were repeatedly determined, which seemed inconsistent with baseline calibration data and observed signal strengths. Concern for Miniranger performance prompted the JD 187 baseline calibration. No systematic problems were revealed by this calibration.

The three point sextant fix procedure was examined to try to account for the large daily correctors. Fix geometry was good, and small inverse distances between fixes and check fixes suggested strong positions. Different signal configurations were tried and the results compared. Each configuration yielded internally consistent corrector values, but the variation was great from one configuration to another.

A check of the Horizontal Control was conducted on the premise that earthquake activity had caused a shift in the relative location of stations. Minor discrepancies (on the order of one meter) were noted but are not considered sufficient to contribute significantly to the problem (See Horizontal Control Report).

The DAVIDSON was unable to determine the cause of the erroneous system checks produced by sextant fixes. Rather than spending additional time investigating the problem, an alternative technique (described below) was adopted which worked well for the remainder of the project.

The baseline transit system check compares corrected (from baseline observations), summed ranges from two Miniranger transponders to the computed (baseline) distance between them. It is performed by steering a range arc around one shore station, while monitoring the rate of its mate. When minimum values are observed, or an observer at one of the shore stations "Marks" baseline transit, rates are frozen and recorded. Baseline correctors are applied to the observed ranges and the ranges summed. The sum is then compared to the computed inverse distance between the stations. Small (5m) differences between computed and observed values indicate reasonable system performance. A set of three consistent observations is considered an adequate test.

Should excessive error be observed, this test will not identify which of the stations is out of order. In this situation, a baseline transit using a third station, or a second transponder on one of the stations, resolves the ambiguity.

Two benefits were realized from adopting this technique. Daily system checks were very consistent, and the time spent conducting the check was much less than is normally spent conducting and computing the three point sextant fix.

H. SHORELINE

Shoreline data was derived from Class III Manuscripts TP 00310 and TP 00311 which were field edited during the survey. Kelp and foul limits delineated by the field editor were used as a guide by the hydrographer. Hydrographic lines were run as close to shoreline, kelp, or foul areas as safety permitted. Verified shoreline features are shown in black ink with changes indicated by red ink. For further information, see the Field Edit Reports for TP 00310 and TP 00311.

I. CROSSLINES

Crosslines comprise 11.5% of the sounding data. In the offshore area where the bottom slopes gently, 98% of all crossings are in

agreement, with 2% differing by 1 fathom. In areas of irregular bottom, 90% of all crossings agree within 1 fathom. This agreement is considered good, since several meters in horizontal displacement between compared soundings could produce up to several fathoms variation in depth in this area. Crosslines are plotted in red ink on the final field sheet. ✓

J. JUNCTIONS

No survey junctions were required. ✓

K. COMPARISON WITH PRIOR SURVEYS/PRESURVEY REVIEW

Selected soundings from H-2927 (1907) 1:20000, H-5437 (1933) 1:20000, H-5438 (1933) 1:20000 and H-8118 (1954) 1:10000 have been inked in brown, blue, green, and orange, respectively on the preliminary field sheet.

Nearly all 1981 soundings are shoaler than soundings taken in 1907; only in the northeast portion of the sheet were the 1907 depths shoaler. This variation may be an artifact of scale differences, or in sounding displacement, considering their proximity to equal or shoaler 1981 survey soundings. Large scale, consistent variations in reported depths are probably related to crustal movement in this geologically active region.

All 1981 soundings are in good agreement with H-5437 (1933); comparison is generally within 1 fathom with the following exceptions:

The 22 fathom sounding (1933) at 57°54'34"N, 152°47'12"W lies in the area of observed 14 to 18 fathom depths. This discrepancy is not considered significant due to its depth, the irregular bottom topography, and slope in the immediate surrounding area. ✓ see D.R. section b

The 26 fathom sounding (1933) at 57°54'38"N, 152°46'34"W lies in an area of 31 to 32 fathoms (1981). The sloping irregular bottom likely explains the difference. There is no indication in the 1981 data to suggest the existence of the 26 fathom depth. ✓ see D.R. section b

All 1981 soundings are in good agreement with H-5438 (1933); comparisons are generally within 1 fathom. ✓

The 1981 data is in fair agreement with H-8118 (1954). Agreement is within 1 fathom in areas of gentle slope. Larger differences were observed in the irregular rocky bottom of Whale Passage, with greater depths observed in 1981. Line spacing was reduced to 22 m in area where the 1954 data suggested potentially dangerous shoals, but the 1954 depths were not supported by 1981 findings (see blowups). The differences are possibly attributable to subsidence associated

with the 1964 earthquake. West of 152°46'15"W, 1981 depths are 0.5 fathoms to 6.8 fathoms (8.2 fathom sounding at 57°56'20"N, 152°51'59"W, H-8118) deeper than 1954 observations. A general comparison suggests subsidence on the order of one to two fathoms relative to the 1954 data. However, several 1981 soundings (see PSR developments 1A and 1C) are shoaler than reported in 1954.

PRESURVEY REVIEW

Presurvey review items were investigated by hydrographic techniques using reduced line spacing. In most cases diver investigations were used to identify least depths.

PSR item 1A, ~~8.4 fathoms~~ 8 Fathoms 4 FEET Sounding at 57°55'10"N, 152°46'10"W, was searched for using 22 m sounding line spacing. Two shoaler soundings were identified. Approximately 85 meters ~~southwest~~ EAST of item 1A at 57°55'07"N, 152°46'06"W is a 7.5 fathom sounding, and approximately 120 meters to the west of item 1A at 57°55'08.5"N, 152°46'16.4"W is a 6.7 fathom sounding. It is recommended that these shoaler soundings replace the charted 8.4 fathom depth. Post #5358/1 Post #3244 (Diver D.P.)

PSR item 1B, ~~7.3 fathoms~~ 7 FATHOMS 3 FEET Sounding at 57°55'01.5"N, 152°46'55.5"W, was searched for using 22 m sounding line spacing. The shoalest depth observed was 8.6 fathoms. The discrepancy can be possibly attributed to subsidence associated with the 1964 earthquake. It is recommended that the 8.6 fathom sounding be shown in lieu of the charted 7.3 fathom depth. at LAT. 57°55'01.4"N, Long. 152°46'56.4"W Post #3138 (Diver D.P.)

PSR item 1C, ~~7.3 fathoms~~ 7 FATHOMS 3 FEET Sounding at 57°54'11"N, 152°47'17.5"W, was searched for using 22 m sounding line spacing. The least depth observed was 6.0 ~~5.7~~ fathoms, approximately 65 meters southwest of item 1C, at 57°54'09.4"N, 152°47'19.5"W. It is recommended that this depth replace the 7.3 fathom charted depth. Post #2316

PSR item 1D, a 10 fathom depth at 57°55'00"N, 152°47'40.5"W was searched for using 22 m sounding line spacing. The least depth observed was 11.1 fathoms. It is recommended that this value replace the 10 fathom PSR depth. at LAT. 57°55'00.2"N, LONG 152°47'46.6"W Post #5460/4

PSR item 1E, a ~~10.4 fathom~~ 10 FATHOMS 4 FEET Sounding depth at 57°55'06"N, 152°47'45"W was searched for using 22 m line spacing. The shoalest sounding was 10.7 ~~10.3~~ fathoms, approximately 70 meters north at 57°55'08.8"N, 152°47'45"W. It is recommended that this depth be used in lieu of the 10.4 fathom PSR depth. Post #5468/1

PSR item 1F contained ~~two~~ 10 FATHOM 6 FEET items, a 10.0 fathom depth at 57°55'09.5"N, 152°48'00"W, and a ~~10.5 fathom~~ depth approximately 115 meters south at 57°55'05.7"N, 152°48'00"W. ~~10.1~~ These locations were developed at 22 meter line spacing. A ~~10.8~~ fathom sounding was recorded approximately 24 meters north of the PSR depth at 57°55'10.4"N, 152°48'00"W 47'59.9 Post #5686/5

It is recommended that the observed depth (101, Pos#5813) supersede the 10.0 fathom PSR depth. A least observed depth of ~~9.8~~ 9.9 fathoms was recorded approximately 65 meters west of the 10.5 fathom PSR depth, at 57°55'05.~~4~~8"N, 152°48'~~03.8~~02.0"W. It is recommended that this depth be charted instead of the ~~10.5 fathom~~ depth. (A 10 FATHOMS 5 FEET Sounding)

PSR item 7 is a visible wreck at 57°56'31.5"N, 152°50'18"W. It was searched for from shore and by boat, and no evidence of wreckage was found on the beach or was indicated on fathograms. It is recommended that the wreck symbol be deleted. SEE Attachment

L. COMPARISON WITH CHART

Comparison of H-9949 with Chart 16594 (1:78900 scale, 9th Edition, December 30, 1978) shows a general trend of subsidence in the Whale Passage area which can be possibly attributed to the March 1964 earthquake, centered at 61°06'N, 147°44'W. In addition to vertical changes, horizontal changes are indicated by horizontal observations between monumented stations used to support this survey. Horizontal displacement on the order of one meter is suggested. (See Horizontal Control Report).

Observed depths are generally equal to or greater than charted depths. The maximum vertical change appears to occur in Whale Passage where general subsidence on the order of 2.5 fathoms was observed. An extreme change of 6.8 fathoms is noted near the western sheet limits in the vicinity of 57°56'20"N, 152°52'00"W. It is doubtful that vertical displacement of that magnitude is attributable to the 1964 earthquake. Since the 1981 data is internally consistent in this area and is therefore believed correct, it is recommended that the source data (H-8118) be reviewed for possible errors. ~~She~~ see E.R. section 6

A small bay on the eastern side of Whale Island (57 57'5~~0~~3"N, 152 44'1~~8~~09"W) was field edited and surveyed. Although shallow, several permanent residences are located in the western extremity of this bay. It is recommended that several representative depths be included on the next edition of Chart 16594. The rock awash indicated on the chart in the eastern portion of the bay at 57°57.9'N, 152°44.1'W was not observed during hydrography (45 m line spacing) or field edit operations. No further investigation of this feature was conducted. It is recommended that the symbol be deleted from future editions of 16594. rock awash from H-2927(1907) do not concur, See Examination Item 5.

Chart 16594 indicates a rock awash 0.3 mile east of the above bay, at 57°57.7'N, 152°43.3'W. The area was developed with sounding lines at 22 m intervals (1:5000 scale blowup #1 JD 176, positions 4749 - 4764). A diver investigation was conducted on JD 197 and the least depth determined to be 0.~~2~~6 fathoms (see JD 197, position 3243). Visibility was good and no other dangers to navigation were observed

by the divers, or are otherwise indicated. It is recommended that this least depth be charted as a submerged rock. Also, the existing charted symbol for this feature is inconspicuous. The new symbol should be made more obvious on the next edition of the chart.

Approximately 0.3 miles to the south, at 57°57.4'N, 152°43.6'W, are three islets surrounded by reef. The charted soundings in this vicinity (6½, 9, and 7 fathoms) agree with 1981 sounding data, but should be replaced by shoaler soundings found during the 1981 survey.

The charted 8 fathom shoal off Dirovati Point at 57°55.6'N, 152°45.2'W is in an area of 3 to 4½ fathoms. A chart revision is indicated.

The charted 8 fathom sounding (PSR item 1A) at 57°55'10", 152°46'10" was developed at 22 m line spacing (blowup #2, 1:5000 scale, JD 190, position 5354 - 5402). A dive investigation was conducted on JD 196 to positively identify a least depth, which was determined to be 6.78 fathoms (see JD 196, position 3241).

The charted ~~7.3 fathom~~ depth at 57°55'01.5"N, 152°46.55.5"W is PSR item 1B. The shoalest sounding located is 8.82 fathoms (see PSR item 1B, Comparison with Prior Surveys, and Inset 2, JD 190, positions 5155 - 5290). A dive investigation was conducted on JD 195 (position 3138) and a least depth determined. ~~The 1981 hydrography is 0.2 fathom shoaler than the diver least depth. The difference is attributed to current displacing the float away from the vertical, or inaccuracy of predicted tides.~~ The minimum tide reduced ~~1981~~ depth should replace the 7.3 fathom charted depth.

The charted ~~3.1~~ fathom depth at 57°55'01.8"N, 152°46'34.6"W was searched for using 22 m line spacing (JD 192, positions 2405-2446). The shoalest sounding observed was 3.79 fathoms. A dive investigation was conducted on JD 197 (position 3244) and the 1981 hydrography is shoaler by 0.21 fathom. This difference is attributed to current displacing the float away from the vertical, or inaccuracy of predicted tides. The minimum tide reduced ~~1981~~ depth should supersede the charted depth.

The charted ~~1 2/4~~ fathom depth at 57°54'52"N, 152°46'24.5"W was searched for using 22 m line spacing (JD 190, position 5291 - 5346). A dive investigation was conducted on JD 196 (position 3242) to identify the least depth, which was determined to be 3.68 fathoms. The diver verified 3.68 fathoms depth should replace the 2¼ fathom charted depth.

The charted 1 3/4 fathom depth west of Ilkognak Rock Light at 57°54'50.8"N, 152°47'05.8"W was developed using 22 m line spacing. The shoalest observed sounding is 2.98 fathoms (JD 190, positions 5155 - 5290) which should replace the 1 3/4 fathom charted depth. A

dive investigation was not conducted. The proximity of the aid to navigation should warn mariners away.

The charted 7 fathom depth at 57°54'11"N, 152°47'17.5"W is PSR item 1C. The shoalest observed depth is ~~5.4~~ 4.0 fathoms (see discussion of PSR item 1C in Comparison with Prior Surveys, and blowup 2, JD 191, positions ~~220 - 2235~~ 2300 - 2325). The 1981 depth should replace the charted depth.

The charted 15 fathom depth at 57°55'12"N, 152°47'13"W should be replaced with the 12 fathom 1981 sounding (JD 193, positions 5423 - 5424).

The charted 8 fathom depth at 57°56'25"N, 152°50'23"W should be superseded by the shoaler 1981 survey data. The 1981 depths range from 5.4 to 7.4 fathoms.

The charted 2½ fathom depth at 57°55'22"N, 152°48'15"W was searched for using 22 m line spacing (blowup 3, JD 190, positions 5644 - 5884). A dive investigation was conducted on JD 220 (position 7393) to verify the least depth, which was determined to be 2.09 fathoms. The diver verified 2.09 fathom depth should supersede the charted depth.

The charted 5.0 fathom depth at 57°55'39"N, 152°49'09"W was searched for using 22 m line spacing (blowup 5, JD 196, positions 7250 - 7280). A dive investigation was conducted on JD 220 (position 7392) to identify the least depth, which was determined to be 4.47 fathoms. The diver verified 4.47 fathom depth should replace the charted depth.

The remaining 1981 survey soundings in Whale Passage, west of longitude 152°47'30"W to the project limit are generally deeper than charted depths.

M. ADEQUACY OF SURVEY

This survey is complete and adequate to supersede prior surveys for charting. Fathograms were scanned for peaks and deeps, and changes made to the raw records when necessary.

N. AIDS TO NAVIGATION

A comparison with the Light List, Volume III, Pacific Coast and Pacific Islands 1981, shows three fixed and one floating aid to navigation within the survey area. Yuzhni Point Buoy #2 was located by launch DA-2 (3132) during hydrographic operations (see JD 178 position 4886). The position of Ilkognak Rock Light 1 (Light No. 3524), Whale Passage Day Beacon 4, and Koniuji Island Light 5 (Light List No. 3525.10) were checked by third order triangulation methods. (See the Horizontal Control Report). It is recommended that the 1981 positions for these fixed aids be adopted.

These aids are adequate, and no additional aids are recommended.

O. STATISTICS

Number of Positions:	~~3178~~ 3423
Total Nautical Miles of Sounding Lines:	353.65
Square Miles:	10.0
Nansen Casts:	1
Bottom Samples:	71

P. MISCELLANEOUS

All investigative dives were conducted with launches DA-1 and DA-2, using the ship's Zodiac inflatable boat as a platform for operations. Before dives, each feature was located with the launch Hydroplot system, and a marker buoy dropped for diver reference. Divers identified least depths and marked them with an anchored float. The launch was maneuvered into position with its Miniranger R-T unit adjacent to the float when Miniranger rates were observed. A sextant angle or third range provided the position check. All dives were conducted as close to slack water as possible. Slack water occurred one to two and one half hours later than current table predictions. In some instances float markers placed by the divers were not directly above the least depth because of the current (see dive data). The appropriate corrections to depth have been applied to this data (JD 220, positions 7392 - 7393).

Q. RECOMMENDATIONS

Increased fishing and commercial traffic have precipitated the need for a more detailed large-scale chart of Whale Passage. A scale of 1:20000 is recommended.

R. AUTOMATED DATA PROCESSING

The following programs were used on the DAVIDSON's PDP 8/e Hydroplot system to prepare field sheets and to collect and process the data:

Program		Version
RK 112	Hyperbolic, Range-Range Hydroplot	3/19/81
RK 201	Grid, Signal, and Lattice Plot	4/18/75

Program		Version
RK 211	Range-Range Non-Real Time Plot	2/02/81
RK 212	Visual Station Table Load	4/1/74
RK 216	Range-Azimuth Non-Real Time Plot	2/9/81
RK 300	Utility Computations	10/21/80
RK 330	Reformat and Data Check	5/4/76
RK 407	Geodetic Inverse/Direct Computation	9/25/78
RK 500	Predicted Tide Generator	11/10/72 ✓
RK 530	Layer Corrections for Velocity	5/10/76
AM 602	ELINORE	5/20/75

S. REFERENCES TO REPORTS

Field Edit Report for TP 00310 and TP 00311
Horizontal Control Report
Field Tide Note
Corrections to Echo Soundings Report
Electronic Control Report

Respectfully submitted:

David I. Actor
LT(jg), NOAA

Approved and forwarded:

N. C. Austin
CDR, NOAA
Commanding Officer

DIA:jaf

Main text is on Page 9 of Descriptive Report

Attachment to Section L
Comparison with the Chart

Chart 16594 (1:78900 scale, 10th edition, July 4 1981) was released concurrently as survey operations on H-9949 (Whale Passage and vicinity) were progressing. This edition of 16594 contains a 1:30000 inset of Whale Passage. Comparison of H-9949 with this chart exhibits agreement within one fathom with the exception of Whale Passage, where a general trend of subsidence is indicated by the 1981 data. H-9949 indicates a revision on the main body of the chart is required in the following location. The rock, charted at (from a MISC. source) 57° 57.2'N, 152° 43.6'W is the southmost extremity of a reef. It is recommended that the rock symbol and the three islets immediately to the north, be perimetered by a reef symbol.

The remainder of this attachment addresses the 1:30000 scale Whale Passage inset. All recommendations concurrently apply to the 1:78900 portion of chart 16594.

Observed depths are generally equal to or deeper than charted except for the following areas:

The 8 fathom 4 foot depth charted at 57° 55'10"N, 152° 46'10"W should be replaced by the 6.8 fathom observed depth at 57° 55'~~15~~ 08"N, 152° 46'~~25~~ 16"W. Pos#4241 CONCUR

The 29 fathom depth charted at 57° 54'17"N, 152° 46'30"W should be replaced by the 28.9 fathom observed depth at 57° 54'~~19~~ 18.4"N, 152° 46'29~~"~~ .67"W. Pos#2270/2 CONCUR

The 7 fathom 3 foot depth charted at 57° 54'12"N, 152° 47'18"W should be replaced by the ~~5.1~~ 6.0 fathom observed depth at 57° 54'10"N, 152° 47'19"W. Position CONCUR

The 5 fathom 1 foot depth charted at 57° 55'39"N, 152° 49'07"W should be replaced by the 4.7 fathom observed depth at 57° 55'39.2"N, 152° 49'06.5"W. Pos#1392 CONCUR

The visible wreck charted at 57° 56'31.5"N, 152° 50'18"W (PSR item 7) was searched for by boat and on shore and not found. It is recommended that the wreck symbol be deleted. CONCUR

Daymarker number 4, 57° 55'27.6"N, 152° 47'49.8"W is located on a reef. It is recommended that a reef symbol be included on the next edition of the chart. CONCUR

The foul area charted in the vicinity of 57° 55'23"N, 152° 48'24"W was searched for during hydrography (45 m line spacing) and by the field editor and not found. The only

evidence of its existence is a dark spot on the aerial photography. It is recommended that it be deleted from the chart. CONCUR

The charted reef at 57° 55'55"N, 152° 31'45"W is located in an area delineated as foul with rocks and kelp by the field editor. It is recommended that the reef symbol be removed. see L.R. section 16, carried forward

The rock symbol charted at 57° 54'57"N, 152° 48'09"W should be included as the northwest limit of the reef symbol indicated. CONCUR 6.5 See Examination, items 3 and 5

Rocks charted on the northwest shore of Kodiak Island from 57° 54'43"N southward to 57° 54'20"N are included in an area delineated as foul with rocks and kelp by the field editor. See L.R. section 6

Shag Rocks, 57° 54'34"N, 152° 47'25"W are charted as 3 rocks that are bare and one rock that is submerged at MLLW. The area was observed as foul with rocks and kelp. The most significant feature of this reef is at 57° 54'31.3"N, 152° 47'23"W (position #6107). It is recommended that the chart be changed to reflect this. Position 6107 could not be found in records. Refers to * (5) from T-sheet. Pos#6107 see L.R. section 6

The 7 fathom area charted in the vicinity of 57° 56'13"N, 152° 52'00"W should be replaced with the observed depth (~~15~~ 13 fathoms). The area was searched for using 22 m line spacing (position 7188 - 7221, J.D. 196). Pos#7191/6 Lat. 57°56'17.46"N Long. 152°52'14.71"W do not concur, See Examination, item 3

put in cabinet

OPR-P146-DA-81
DA-10-1-81 (H-9949)
PARAMETER TAPES PRINTOUT

DA-10-1A-81
SKEW: 0,22,52

FEST=20000
CLAT=6412000
CMER=152/45/00
GRID=30
PLSCL=10000
PLAT=57/53/48
PLON=152/54/15
VESNO=3132
YR=81
ANDIST=00.0

DA 10-1B-81
SKEW: 0,17,26

FEST=20000
CLAT=6412000
CMER=152/45/00
GRID=30
PLSCL=10000
PLAT=57/56/06
PLON=152/47/00
VESNO=3132
YR=81
ANDIST=00.0

INSET #1
SKEW: 0,20,22

FEST=20000
CLAT=6412000
CMER=152/45/00
GRID=15
PLSCL=5000
PLAT=57/57/00
PLON=152/45/15
VESNO=3132
YR=81
ANDIST=00.0

cahier

OPR-P146-DA-81
DA-10-1-81 (H-9949)
PARAMETER TAPES PRINTOUT CONT.

DA 10-1-81
INSET #2
SKEW:90,22,23

FEST=20000
CLAT=6412000
CMER=152/45/00
GRID=15
PLSCL=5000
PLAT=57/53/55
PLON=152/45/40
VESNO=3132
YR=81
ANDIST=00.0

INSET #3
SKEW: 90,21,22

FEST=20000
CLAT=6412000
CMER=152/45/00
GRID=15
PLSCL=5000
PLAT=57/54/30
PLON=152/47/15
VESNO=3132
YR=81
ANDIST=00.0

INSET #4
SKEW: 90,13,14

FEST=20000
CLAT=6412000
CMER=152/45/00
GRID=10
PLSCL=2500
PLAT=57/54/19
PLON=152/47/30
VESNO=3132
YR=81
ANDIST=00.0

earlier

OPR-P146-DA-81
DA-10-1-81 (H-9949)
PARAMETER TAPES PRINTOUT CONT.

DA 10-1-81
INSET #5
SKEW: 0,22,30

FEST=20000
CLAT=6412000
CMER=152/45/00
GRID=15
PLSCL=5000
PLAT=57/55/10
PLON=152/52/30
VESNO=3132
YR=81
ANDIST=00.0

FIELD TIDE NOTE
OPR P146 - DA,FA-1981
H-9949 DA 10-1-81
WHALE PASSAGE, ALASKA

Field tide reduction of soundings on H-9949 (DA 10-1-81) is based on predicted tides for Kodiak, Alaska, corrected to Kizhuyak Point, Kodiak Island (No. 1761, Tide Tables 1981, West Coast of North and South America). Tidal heights were interpolated from tabular extrema using the DAVIDSON's PDP 8/e system and program AM 500. All times of predicted and recorded tides are Greenwich Mean Time.

Three tide stations were occupied to provide data for H-9949 (DA 10-1-81). They are listed below.

Station	G.P.	Period of Operation	S/N
Kizhuyak Pt. (945-7332)	57/53.7 N 152/39.1 W	6/12/81 - 9/4/81	73A233 64A11030
Uzkosti Pt. (945-7376	57/55.7 N 152/48.7 W	6/14/81 - 8/9/81	68A9335
Nachalni Is. (945-7407)	57/58.7 N 152/55.5 W	6/16/81 - 8/16/81	75A235

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-9949 (DA 10-1-81).

Uzkosti Pt. (945-7376)

The Uzkosti Point tide gage was installed in an area of strong

currents. The gage clock mechanism required nearly constant attention during the period of installation. The gage continuously provided good data from installation until 16 July 1981, although the gage time was reset three times during the period. These time errors were distributed linearly through the time period during marigram scanning. The gage time was set on 16 July 1981, prior to the DAVIDSON's departure for an operating area which prevented regular visits to the gage site. The gage was next checked on 25 July 1981 and found to be 1 hour, 10 minutes fast; it had jumped a sprocket hole on three occasions. The gage was incorrectly reset and the error not discovered until the gage was checked on 28 July 1981. At that time the gage was reset to the correct time. The pattern of jumped sprocket holes and time gains continued. The gage time was reset on four occasions between 28 July 1981 and the gage's removal on 9 August 1981. Time errors were distributed linearly over the period between observations during marigram scanning unless a sprocket hole jump was identifiable by the characteristic dimples between sprocket holes.

Based on 44 staff-to-gage comparisons, including a total of three hours of observations at 12 minute intervals on 16 June 1981, the marigram reads 3.34 feet greater than the staff.

Nachalni Island (945-7407)

This gage experienced constant problems with the clock mechanism. The time was reset or clock mechanism adjusted nearly every time the gage was checked, as documented in the pressure tide gage record. When scanning the marigram, the time errors were distributed linearly through the period between observations. The gage was last checked on 6 August 1981, and allowed to run down until it stopped on 16 August 1981. The gage and staff were removed on 31 August 1981.

Based on 40 staff-to-gage comparisons, including three hours of observations at 12 minute intervals on 16 June 1981, the marigram reads 7.81 feet greater than the staff.

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 Uzkosti Point tide staff was leveled to three historic bench marks (1954) and two newly established bench marks. A negligible shift of the staff of -.003 meters was observed.

The Nachalni Island tide staff was leveled to two historic bench marks (1941) and three 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

Whale Passage is an impediment to free tidal communication between Kupreanof Strait and Marmot Bay. Tide gages were installed on the Kupreanof Strait (Nachalni Is., 945-7407) and Marmot Bay (Kizhuyak Pt., 945-7332) sides of Whale Passage, as well as in Whale Passage (Uzkosti Pt., 945-7376). Zoning for tidal correctors should consider the tidal regimes present. It is beyond the scope of the DAVIDSON's review of acquired tide data to provide specific zoning recommendations for H-9949 (DA 10-1-81).

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

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

ABSTRACT OF TIME OF HYDROGRAPHY ~~OR FIELD WORK~~

Date June 16, 1981

Project No. OPR-P146-DA-81 Vessel Launch DA-1 (31311)

Date of Survey June- August 1981

Fieldsheet No. DA-10-1-81 Registry No. H-9949

Fieldsheet is Complete/~~Incomplete~~

J.D.	Time(Z)		J.D.	Time(Z)
167	215900	-	167	225550
177	214158	-	178	002938
179	223653	-	180	014536
180	200333	-	180	202118
191	183910	-	192	003228
192	181416	-	193	022709
193	185729	-	193	230133
194	192336	-	195	000731
195	232458	-	196	003640
196	185657	-	196	214200
197	203800	-	197	215000

J.D.	Time(Z)		J.D.	Time(Z)
		-		

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

ABSTRACT OF TIME OF HYDROGRAPHY ~~OR FIELD EDIT~~

Date June 13, 1981

Project No. OPR-P146-DA-81 Vessel Launc DA-2(3132)

Date of Survey June- August 1981

Fieldsheet No. DA-10-1-81 Registry No. H-9949

Fieldsheet is Complete/~~Incomplete~~

J.D.	Time(z)		J.D.	Time(z)
165	214101	-	166	000910
166	185909	-	166	234838
168	194632	-	168	235357
174	202349	-	174	233650
175	191329	-	176	015745
176	194802	-	176	231630
178	190746	-	179	002038
180	194502	-	181	002340
181	210140	-	181	225845
189	204304	-	189	233810
190	183416	-	190	234311
193	183910	-	194	001420
194	184946	-	195	003815
195	184026	-	195	224240
196	213857	-	197	002534
197	212928	-	197	233200
220	220656	-	220	230153
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		-		

J.D.	Time(z)		J.D.	Time(z)
		-		
		-		
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OPR-P146-DA-81
DA-10-1-81 (H-9949)
PREDICTED TIDES CORRECTOR TAPE PRINTOUT

KODIAK, ALASKA
1761(KIZHUYAK POINT)
57 54 152 39 0.09 0.12 0.9 0.2 1.0 1.0
000
FM
0.2

OPR-P146-DA-81
DA-10-1-81(H-9949)
VELOCITY AND TC/TI TAPES PRINTOUT

VELOCITY TAPE:
000035 0 0000 0001 Ø001 000000 009949
000105 0 0001
000172 0 0002
000245 0 0003
000330 0 0004
000415 0 0005
000514 0 0006
000599 0 0007
000690 0 0008
000785 0 0009
000880 0 0010

TC/TI TAPES:

SHIP DAVIDSON(3130) For B.S.
182300 0 0000 0001 211 313000 000000
235900 0 0000

LAUNCH DA-1(3131)
215800 0 0003 0001 167 313100 000000
185657 0 0003 0001 196 313100 000000
235900 0 0003

LAUNCH DA-2(3132)
214101 0 0003 0001 165 313200 000000
220656 0 0003 0001 220 313200 000000
235900 0 0003

OPR P-146-DA-81

SOUNDING CORRECTION ABSTRACT

Ross Fathometer No. 1048

FIELD NO. DA-10-1-81

VESSEL Launch DA-1 (3131)

REGISTRY NO. H- 9949

Julian Date	From Time (GMT)	To Time (GMT)	Velocity Corr Table No.	(Note: TRA Corr. is the algebraic sum of these columns) Draft Corr	Instrument Error Corr	Initial Corr	S&S Corr	TRA Corr ft/fm	Remarks
Entire Survey			1	0.3 fm	0.0	0.0	0.0	0.3 fm	

OPR P-146-DA-81

SOUNDING CORRECTION ABSTRACT

Ross Fathometer No. 1080

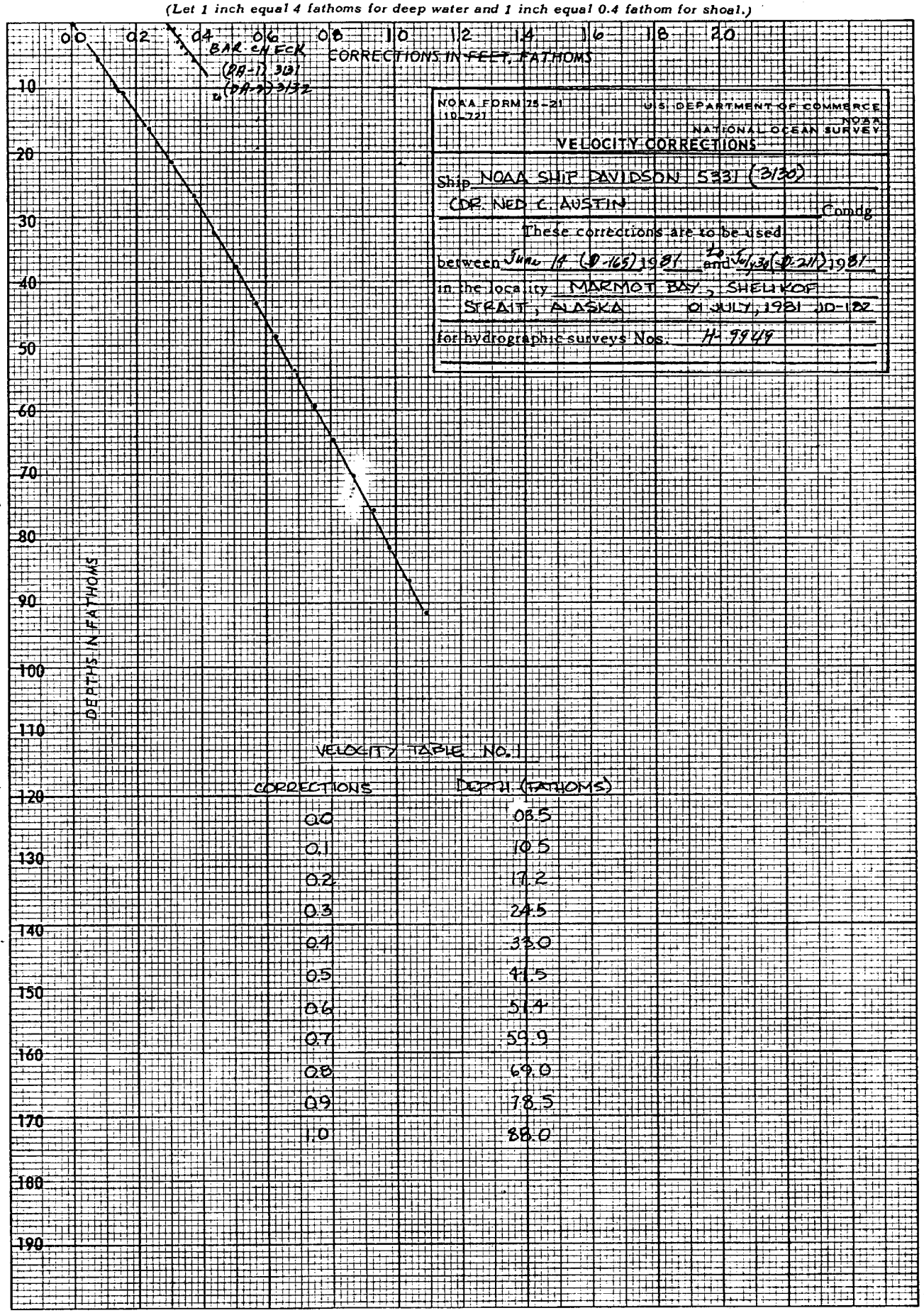
FIELD NO. DA-10-1-81

VESSEL Launch DA-2(3132)

REGISTRY NO. H-9949

Julian Date	From Time (GMT)	To Time (GMT)	Velocity Corr Table No.	(Note: TRA Corr. is the algebraic sum of these columns) Draft Corr	Instrument Error Corr	Initial Corr	S&S Corr	TRA Corr ft/fm	Remarks
Entire Survey			1	0.3 fm	0.0	0.0	0.0	0.3 fm	

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



NOAA FORM 75-21 (10-72) U.S. DEPARTMENT OF COMMERCE NOAA NATIONAL OCEAN SURVEY

VELOCITY CORRECTIONS

Ship NOAA SHIP DAVIDSON 5331 (3130)

CDR. NED C. AUSTIN Comdg

These corrections are to be used

between June 14 (D-165) 1981 and July 30 (D-211) 1981

in the locality MARMOT BAY, SHELIKOF STRAIT, ALASKA 01 JULY, 1981 JD-182

for hydrographic surveys Nos. H-9949

(For deep water add a 0 to these figures)

VELOCITY TABLE NO. 1

CORRECTIONS	DEPTH (FATHOMS)
0.0	08.5
0.1	10.5
0.2	17.2
0.3	24.5
0.4	33.0
0.5	41.5
0.6	51.4
0.7	59.9
0.8	69.0
0.9	78.5
1.0	88.0

46 1240

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☆ U.S. GOV. PRINTING OFFICE: 1975—668-1

FORM CD-26
(12-11-46)

U.S. DEPARTMENT OF COMMERCE

WORKSHEET

BARCHECK ABSTRACT
LAUNCH DA-1 (3131)

DA10-1-81 (H-9949)

TD	1.0 fm	2.0 fm	3.0 fm	4.0 fm	5.0 fm	6.0 fm	7.0 fm	REMARKS
177/178	0.7	1.7	2.7	3.7	4.6	5.6		GOOD
179/180	0.7	1.6	2.7	3.7	4.7	5.7		GOOD
180	0.7	1.7	2.7	3.6	4.6	5.6		FAIR
190	0.7	1.7	2.6	3.6	4.6	5.6		GOOD
192	0.7	1.6	2.7	3.7	4.6	5.6		GOOD
193	0.7	1.7	2.7	3.7	4.7	5.7		GOOD
	0.6	1.6	2.7	3.7	4.6	5.6		
194	0.7	1.7	2.6	3.7	4.7	5.6		GOOD
	0.7	1.7	2.7	3.7	4.7	5.6		
196	0.7	1.7	2.7	3.7	4.7	5.6		GOOD
	0.7	1.7	2.7	3.6	4.6	5.6		
209	0.6	1.6	2.6	3.6	4.6	5.6	6.5	GOOD
	0.6	1.6	2.6	3.6	4.6	5.6	6.5	
210/211	0.7	1.65	2.7	3.6	4.6	5.6		GOOD
	0.7	1.7	2.7	3.7	4.7	5.7		FAIR
MEAN	0.68	1.66	2.67	3.66	4.64	5.62	6.5	
	0.32	0.34	0.33	0.34	0.36	0.38	0.50	

TRA = 0.3 fm from intercept with Depth = 0

* U.S. GOVERNMENT PRINTING OFFICE: 1973-762-353

FORM CD-26
(12-11-46)

U.S. DEPARTMENT OF COMMERCE

WORKSHEET

BAR CHECK ABSTRACT
LAUNCH DA-2 (3132)

DA-10-1-81 (H-9949)

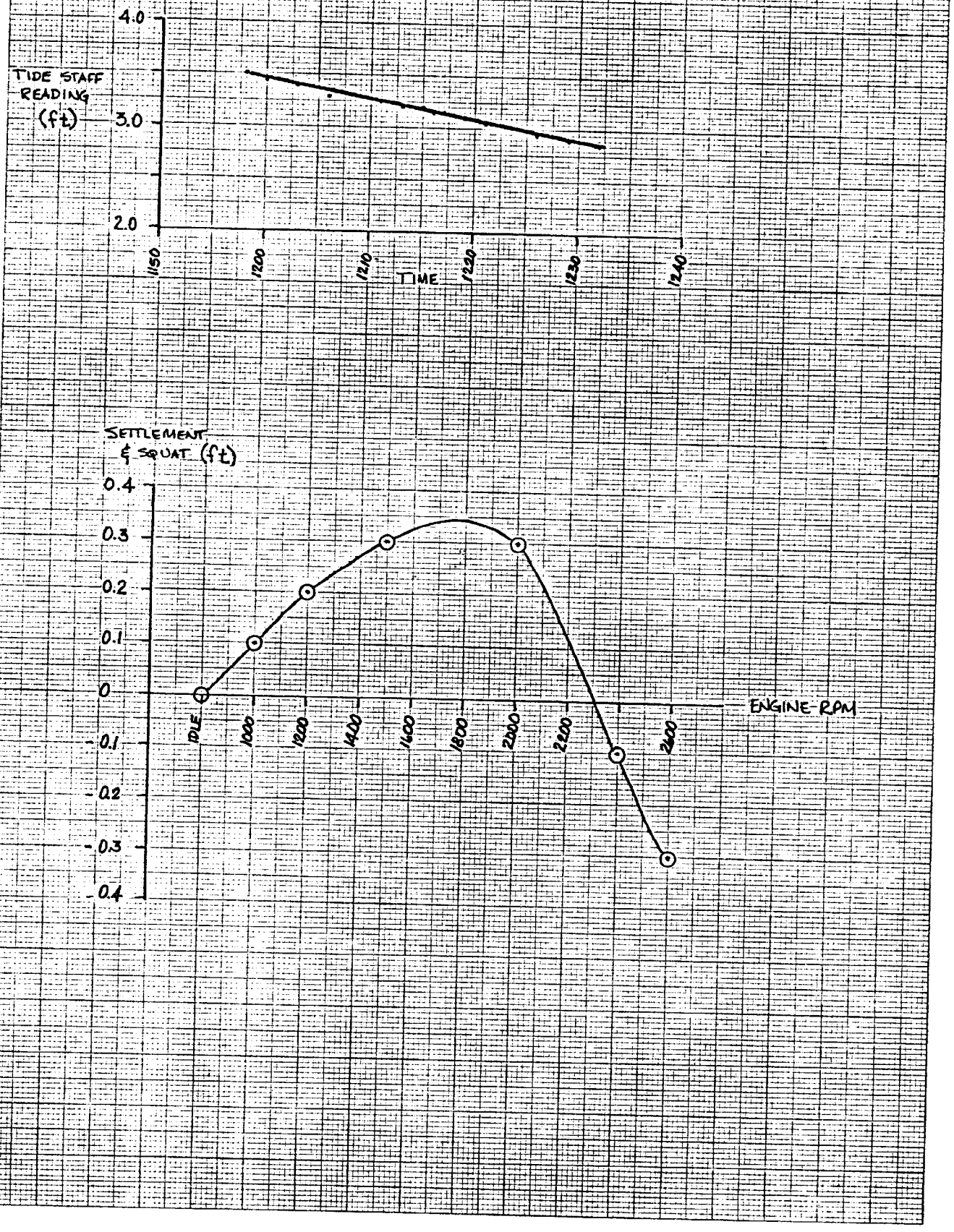
S.D.	1.0 fm	2.0 fm	3.0 fm	4.0 fm	5.0 fm	6.0 fm	7.0 fm	Remarks
165/	0.7	1.7	2.7	3.7	4.7	5.7	6.7	GOOD
/166	0.7	1.8	2.7	3.7	4.7	5.7	—	GOOD
166	0.7	1.7	2.7	3.7	4.7	5.7		GOOD
168	0.7	1.7	2.7	3.7	4.7	5.7		GOOD
174	0.7	1.7	2.6	3.7	4.7	5.7		GOOD
175/176	0.7	1.7	2.7	3.7	4.7	5.7		GOOD
176	0.7	1.7	2.7	3.7	4.7	5.7		GOOD
178/179	0.7	1.7	2.7	3.7	4.7	5.7		GOOD
181	0.7	1.7	2.7	3.7	—	—		GOOD
189	0.7	1.7	2.7	3.7	4.7	5.7	6.7	GOOD
190	0.7	1.7	2.7	3.7	4.7	5.6		GOOD
193	0.7	1.7	2.7	3.7	4.7	5.7		GOOD
194	0.7	1.7	2.7	3.7	4.7	5.7		GOOD
195	0.7	1.7	2.7	3.7	4.7	5.7		GOOD
196/197	0.7	1.7	2.7	3.6	4.6	5.7		GOOD
197	0.7	1.7	2.7	—	—	—		GOOD
MEAN	0.70	1.71	2.69	3.69	4.69	5.69	6.70	
	0.30	0.29	0.31	0.31	0.31	0.31	0.30	

TRA = 0.3 fm from intercept with Depth = 0

* U.S. GOVERNMENT PRINTING OFFICE: 1973-762-353

LAUNCH DA-1
3/24/81

SETTLEMENT AND SQUAT



10 Millimeters to the Centimeter

DA-1
24 MAR 1981
PUGET SOUND

	RUN #	TIDE CORR'N (3.5 − STAFF RDG)	OBSERVED ELEVATION	CORRECTED ELEVATION (OBS − TIDE CORR'N)	SETTLEMENT & SQUAT (CORR ELEV − STATIC)	ENGINE RPM
PORT	1158	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
STBD	1200	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 PORT & STBD 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

RANGE/AZIMUTH CORRECTOR ABSTRACT

VESSEL : 3130 SHEET : DA 10-1-81

TIME	DAY	PATTERN 1	PATTERN 2
182300	211	+00000	

No Correction

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 3132 SHEET : DA 10-1-81

TIME	DAY	PATTERN 1	PATTERN 2
214101	165	+00001	+00002
000150	166	+00001	+00002
185909	166	+00001	+00002
215158	166	+00001	-00001
194632	168	+00001	+00002
202349	174	+00001	+00002
191329	175	+00001	+00002
225132		+00001	+00001
000300	176	+00001	+00002
003954	176	+00001	+00002
194802	176	+00001	+00002
221340	176	+00001	+00002
190746	178	+00001	+00002
000002	179	+00001	+00002
194502	180	+00001	+00002
203415	180	+00001	+00002
221138		-00001	+00001
222914		+00001	+00001
224413		-00001	+00001
230354		+00001	+00001
000004	181	+00001	-00001
204303	189	+000003	+000080
223721		+00000	-00002
225613		+00003	+00000
233334		-00002	+00000
183416	190	+00003	+00000
231901		+00000	-00002
183910	193	+00001	+00003
192139		+00000	+00001
205722		-00002	+00000
214921		+00001	-00002
222014		+00000	+00001

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 3131 SHEET : DA 10-1-81

TIME	DAY	PATTERN 1	PATTERN 2
215800	167	+00004	+00000
223830		+00002	-00001
225441		-00001	+00002
214158	177	+00004	-00001
000310	178	+00004	-00001
223553	179	+00002	+00004
000147	180	+00002	+00004
200333	180	+00004	-00001
183910	191	+00004	-00002
233512		-00002	+00002
234438		-00002	-00002
000124	192	-00002	-00002
181416	192	-00002	-00002
201043		+00002	-00002
000018	193	+00002	-00002
012429		-00002	+00004
15238	193	-00002	+00004
185729	193	+00002	-00002
192246	194	+00000	-00002
202120		-00002	+00004
212937		+00000	+00004
231859		+00000	-00002
234714		+00004	+00000
000001	195	+00004	+00000
204900	195	-00002	-00002
232458	195	+00002	-00002
233327		-00002	+00000
234817		+00000	-00002
000436	196	+00000	-00002
003640		+00000	+00004
185657	196	-00002	+00002

ELECTRONIC CORRECTOR ABSTRACT

VESSEL : 3132 SHEET : DA 10-1-81

TIME	DAY	PATTERN 1	PATTERN 2
223426	193	+00001	-00002
225042		+00000	+00001
234556		+00000	-00002
000003	194	+00000	-00002
184946	194	-00002	+00000
230325		-00002	-00002
000005	195	-00002	-00002
184026	195	-00002	+00003
201928		-00001	-00002
221130		-00002	-00002
213857	196	-00001	-00002
222839		+00000	-00002
235151		-00001	-00002
000308	197	+00000	-00002

RANGE/AZIMUTH CORRECTOR ABSTRACT

VESSEL : 3132 SHEET : DA 10-1-81

TIME	DAY	PATTERN 1	PATTERN 2
210140	181	+00001 ✓	
212928	197	+00000 ✓	

No Correction

OPR-P145-DA-81
DA 10-1-81 (H-9949) DA 10-2-81 (H-9957)
SIGNAL TAPE PRINTOUT

~~001 6 57 55 33251 152 35 07983 250 0027 000000~~
~~NOF 2 1967~~
002 7 57 54 54447 152 38 10773 250 0007 000000
KIZ 1933
003 5 57 52 52235 152 40 17559 139 0017 000000
CRAG 1933
004 5 57 54 17432 152 47 32313 250 0011 000000
SHAG 1954
005 5 57 54 48629 152 48 04548 250 0012 000000
HALE 1954
006 6 57 55 04451 152 48 44088 250 0014 000000
SAGE 1954
~~007 6 57 55 32027 152 50 11048 139 0009 000000~~
~~CARE 1954~~
008 6 57 55 48723 152 51 01971 250 0001 000000
KRAD 1954
~~009 6 57 55 58336 152 52 37093 139 0010 000000~~
~~PATH 1954~~
~~010 6 57 56 57361 152 56 07339 139 0008 000000~~
~~DARK 1907~~
011 1 57 56 29053 152 50 38083 250 0023 000000
BARON ~~RM 1~~ 1954 RM1
012 2 57 55 49~~434~~ 152 50 11~~555~~ 254 0000 000000
KONIUJI ISLAND LIGHT ~~ECC.~~ 1981 ECC
013 2 57 55 38078 152 48 36348 250 0001 000000
UZKOS 1954
014 2 57 55 27~~615~~ 152 47 49~~786~~ 139 0000 000000
WHALE PASSAGE DAYBEACON 1954-1981
~~015 1 57 55 19151 152 47 20915 139 0001 000000~~
~~BIRD 1954~~
016 2 57 55 16011 152 46 49888 250 0001 000000
YUZ 1954
~~017 1 57 55 07270 152 46 29530 243 0000 000000~~
~~YUZHNI POINT BUOY "2" 1981~~
018 6 57 54 51760 152 46 54308 254 0000 000000
ILKOGNAK ROCK LIGHT ~~ECC.~~ 1981 ECC
019 2 57 55 20297 152 46 20557 139 0004 000000
DIROV 1954
020 3 57 56 30952 152 44 09124 250 0007 000000
VOL 1907
021 3 57 58 39956 152 42 21816 250 0015 000000
SWIFT ~~SHIFT~~ 1933
~~022 5 57 59 12128 152 43 15571 139 0008 000000~~
~~CURE 1933~~
023 5 57 52 09403 152 42 37602 250 0026 000000
MAN 2 1933

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~~)(T.P.)
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 03193 152 35 29193 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 05806 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 40380 152 33 15600 243 0000 000000~~
~~PASS POINT (TEMP. PT)~~

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ABSTRACT OF POSITIONS
DA-10-1-81(H-9949)

DAY	POSITIONS	CNTRL	S1	M	S2	REMARKS
165	4001-4008	042	002	---	020	Mainscheme
165	4012-4060	042	002	---	020	Mainscheme
165	4061-4111	042	002	---	020	Splits
166	4112-4123	042	002	---	020	X-Lines
166	4124-4126	042	002	---	020	Fill in
166	4128-4184	042	002	---	020	Splits
166	4185-4198	042	002	---	020	X-Lines
166	4199-4247	042	021	---	002	Mainscheme
166	4248-4254	042	021	---	002	X-Line
167	2001	042	002	---	020	Bottom sample
167	2002	042	021	---	020	Bottom sample
167	2003	042	020	---	021	Bottom sample
168	4255-4284	042	002	---	023	Mainscheme
168	4285-4322	042	002	---	023	Splits
168	4323-4337	042	002	---	023	X-Lines
168	4338-4350	042	002	---	023	Splits
168	4351-4381	042	002	---	023	Splits
168	4382-4883	042	002	---	023	X-Line
168	4386-4399	042	002	---	023	X-Line
174	4408	042	002	---	023	DP on Red Nun Buoy #2
174	4455-4512	042	002	---	023	Mainscheme
175	4513-4564	042	002	---	023	Shoreline
175	4565-4630	042	002	---	023	Mainscheme
175	4631-4646	042	002	---	023	Fill in
175	4647-4670	042	002	---	023	Splits
176	4671-4678	042	002	---	023	X-Lines
176	4679-4745	042	002	---	023	Shoreline
176	4747-4748	042	002	---	023	Bottom samples
176	4749-4760	042	002	---	023	Development
176	4761-4764	042	002	---	023	X-Lines
176	4765-4777	042	002	---	023	Foul Area
176	4778-4780	042	002	---	023	Split
176	4784-4789	042	002	---	023	Shoreline
176	4790-4828	042	002	---	023	Mainscheme
176	4830-4852	042	002	---	023	Mainscheme
177	2004-2047	042	002	---	023	Mainscheme
177	2049-2059	042	002	---	023	Mainscheme
177	2060-2062	042	002	---	023	Fill in
177	2064-2074	042	002	---	023	Fill in
177-178	2075-2101	042	002	---	023	Splits
178	2105-2108	042	002	---	023	X-Line
178	4853-4855	042	002	---	023	Fill in
178	4861-4868	042	002	---	023	Fill in
178	4869-4885	042	002	---	023	Shoreline
178	4886-	042	002	---	023	DP on Buoy N"2"
178	4908-4922	042	002	---	023	Shoreline
178	4933-4944	042	002	---	023	Mainscheme
179	4953-4984	042	002	---	023	Mainscheme
179	4985-4992	042	002	---	023	X-Line
179	4993-4997	042	002	---	023	Mainscheme

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ABSTRACT OF POSITIONS
DA-10-1-81(H-9949)

DAY	POSITIONS	CNTRL	S1 M S2	REMARKS
179	2117-2129	042	016 --- 002	Shoreline
179	2131-2142	042	016 --- 002	Shoreline
179-180	2146-2169	042	016 --- 002	Mainscheme
180	2172-2180	042	016 --- 002	Mainscheme
180	2181-2187	042	016 --- 002	Foul Area
180	2188-2189	042	016 --- 002	Fill in
180	2190-2202	042	016 --- 002	Fill in
180	2206-2213	042	016 --- 002	Fill in
180	2214-2243	042	016 --- 002	Mainscheme
180	2244-2257	042	016 --- 002	X-Lines
180	4498-4499	042	002 --- 023	Bottom samples
180	5000-5000	042	002 --- 023	Bottom samples
180	5001-5007	042	002 --- 023	Bottom samples
180	5008,5010	042	005 --- 016	Bottom samples
180	5011-5012	042	002 --- 023	Bottom samples
180	5013-5014	042	005 --- 016	Bottom samples
180	5115-5020	042	002 --- 023	Bottom samples
180	2260-2264	042	002 --- 023	Splits
181	5022-5028	042	016 --- 005	Bottom samples
181	5029-5047	112	024 --- R/Az	Shoreline/Kelp Limit
181	5048-5070	112	024 --- R/Az	Mainscheme
181	5071-5092	112	024 --- R/Az	Splits
181	5093-5096	112	024 --- R/Az	X-Line
189	5097-5104	042	005 --- 018	Shorelines
189	5105-5106	042	005 --- 018	Fill in
189	5109-5124	042	018 --- 006	Mainscheme
189	5125-5126	042	005 --- 013	Fill in
189	5128-5151	042	005 --- 013	Splits
189	5152-5154	042	006 --- 013	X-Line
190	5155-5187	042	005 --- 013	Development
190	5189-5269	042	005 --- 013	Development
190	5270-5290	042	005 --- 013	Development PSR Item
190	5291-5346	042	005 --- 013	Development
190	5254-5383	042	018 --- 006	Development
190	5385-5402	042	018 --- 006	Development
191	2266-2292	042	005 --- 018	Development
191	2300-2323	042	005 --- 018	Development
191	2327-2335	042	005 --- 018	Development
191	2336-2344	042	005 --- 018	Shoreline
191	2345-2347	042	005 --- 018	Fill in
191	2348-2352	042	006 --- 013	Shoreline/Kelp Limit
192	2353-2385	042	013 --- 006	Shoreline/Kelp Limit
192	2386-2446	042	018 --- 006	Development
192	2447-2500	042	013 --- 018	Development
192	2508-2522	042	013 --- 018	Development
192	2525-2579	042	013 --- 018	Development
192-193	2581-2631	042	013 --- 018	Development
193	2632-2679	042	018 --- 004	In Shore Development
193	2682-2690	042	018 --- 004	In Shore Development
193	5403-5430	042	018 --- 004	Mainscheme
193	5432-5458	042	013 --- 018	Shoreline/Kelp Limit

ABSTRACT OF POSITIONS
DA-10-1-81(H-9949)

DAY	POSITIONS	CNTRL	S1	M	S2	REMARKS
193	5459-5510	042	006	---	013	Mainscheme
193	5511-5542	042	018	---	006	Mainscheme
193	5543-5554	042	013	---	018	Mainscheme
193	5555-5578	042	018	---	006	Mainscheme
193	5579-5603	042	013	---	018	Mainscheme
193	5606-5608	042	013	---	018	Shoreline
193	5612-5614	042	013	---	006	Shoreline
193-194	5616-5643	042	013	---	006	Mainscheme
193	2691-2700	042	013	---	006	Shoreline
193	2703-2709	042	013	---	006	Shoreline
193	2711-2714	042	013	---	006	Shoreline
193	2716-2745	042	013	---	006	Mainscheme
193	2747-2871	042	013	---	006	Mainscheme
193	2872-2893	042	013	---	006	X-Lines
194	5644-5684	042	006	---	013	PSR Item Development
194	5686-5725	042	006	---	013	PSR Item Development
194	5729-5737	042	006	---	013	PSR Item Development
194	5738-5769	042	012	---	013	PSR Item Development
194	5773-5812	042	012	---	013	PSR Item Development
194	5813-5884	042	006	---	013	PSR Item Development
194	5885-5901	042	012	---	013	Fill in
194	5902-5917	042	012	---	013	Shoreline
194	5918-5945	042	006	---	012	Shoreline
194	5946-5951	042	006	---	012	Mainscheme
194-195	5954-5999	042	006	---	012	Mainscheme
195	7000-7024	042	006	---	012	Mainscheme
194	2894-2916	042	011	---	012	Shoreline
194	2917-2937	042	012	---	008	Shoreline
194	2938-3062	042	011	---	008	Mainscheme
194	3063-3107	042	011	---	012	Mainscheme
194	3108-3137	042	008	---	011	Mainscheme
195	7025-7128	042	012	---	008	Mainscheme
195	7129-7150	042	011	---	012	X-Lines
195	7151-7156	042	008	---	011	X-Line
195	7157-7183	042	006	---	012	X-Lines
195	7184-7187	042	012	---	013	X-Line
195	3138	042	018	---	006	DP
195	3141-	042	018	---	006	Bottom sample
195	3142-3144	042	012	---	011	Bottom samples
195-196	3145-3151	042	011	---	012	Bottom samples
196	3152	042	011	---	008	Bottom sample
196	3158-3240	042	006	---	013	Development
196	3141-3142	042	018	---	006	DP's
196	7188-7249	042	011	---	012	Development
196	7250-7335	042	013	---	006	Development
196	7336-7337	042	011	---	012	Bottom samples
197	7338-7342	042	013	---	006	Bottom samples
197	7343	042	006	---	013	Bottom sample
197	7344-7355	112	025	---	R/Az	Shoreline
197	7356-7379	112	025	---	R/Az	Mainscheme
197	7380-7391	112	025	---	R/A	X-Lines

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ABSTRACT OF POSITIONS
DA-10-1-81(H-9949)

DAY	POSITIONS	CNTRL	S1	M	S2	REMARKS
211	0001-0003	042	004	---	019	Bottom samples
211	0004-0007	042	019	---	020	Bottom samples
211	0008-0011	042	020	---	021	Bottom samples
220	7392	042	013	---	006	DP
220	7393	042	006	---	013	DP
197	3243	112	025	---	R/A	DP
197	3244	042	018	---	006	DP

NOAA FORM 75-44
(11-72)

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

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

VESSEL	PROJ. NO.	YEAR		CHECKED BY	DATE CHECKED
Ship 3130	OPR-P146	1981	DA-10-1-81 (H-9949)	CRD	Aug. 15. 1981

SERIAL NO.	DATE	SAMPLE POSITION LATITUDE	SAMPLE POSITION LONGITUDE	DEPTH (Fathoms)	WEIGHT OF SAMPLER	APPROX. PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS. INIT.
001	J.D-211 30-July	57/54/00	152/46/12		85lbs	10cm			brk Sh, G	SCALLOP SHELLS	DR
002	J.D. 211 30-July	57/54/30	152/45/36		85lbs.	10cm			crs S, G, St		DR
003	J.D-211 30-July	57/54/54	152/45/12		85lbs.	10cm			crs S, G, brk Sh		DR
004	J.D-211 30-July	57/55/24	152/44/36		85lbs	10cm		gy, [illegible]	fne S, brk Sh, P, M		DR
005	J.D.211 30-July	57/55/36	152/44/12		85lbs.	10cm		gy	fne S, M	worm tubes	DR
006	J.D-211 30-July	57/56/00	152/43/36		85lbs	10cm		gy	fne S	worm tubes	DR
007	J.D. 211 30-July	57/56/30	152/43/12		85lbs	10cm		gy	M	worm tubes	KMS
008	J.D.211 30-July	57/56/54	152/42/54		85lbs	10cm		gy	M, fne S	worm tubes	DR
009	J.D.211 30-July	57/57/12	152/42/24		85lbs	10cm		gy	M, fne S	worm tubes	DR
010	J.D. 211 30-July	57/57/36	152/42/00		85lbs.	10cm		gy	M, fne S		DR
011	J.D. 211 30 July	57/57/36	152/41/00		85lbs.	10cm		gy	M, fne S		KMS

Use more than one line per sample if necessary.

☆ U.S. G.P.O. 1972-769-565/530 REG. #6

NOAA FORM 75-44
(11-72)

NOAA SHIP DAVIDSON S331

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

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

VESSEL	PROJ. NO.	YEAR		CHECKED BY	DATE CHECKED
LAUNCH 3131	OPR-P146-DA	81	DA 10-1-81 (H-9949)	DA	30 JUNE 1981

FIX ~~SERIAL~~ NO.	DATE	SAMPLE POSITION LATITUDE	SAMPLE POSITION LONGITUDE	DEPTH (Fathoms)	WEIGHT OF SAMPLER LBS.	APPROX. PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS. INIT.
2001	16 JUNE JD 167	57/57/56	152/43/05	7.2	10				~~Hrd~~, ~~Rky~~ rky, ~~hard~~		DRH
2002	JD 167	57/57/49	152/43/56	6.6	10			gy, bk	fne S		DRH
2003	JD 167	57/56/30	152/43/59	19.6	10			gy, bk	fne S, brk Sh		DRH

Use more than one line per sample if necessary.

☆ U.S. G.P.O. 1972-769-565/530 REG. #6

NOAA FORM 75-44
(11-72)

NOAA SHIP DAVIDSON S331

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

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

VESSEL	PROJ. NO.	YEAR		CHECKED BY	DATE CHECKED
LAUNCH 3131	OPR-P146-DA	81	DA-10-1-81 (H-9949)	RMJ	20 JUL 81

Fix ~~SERIAL~~ NO.	DATE	SAMPLE POSITION		DEPTH (Fathoms)	WEIGHT OF SAMPLER LBS	APPROX. PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS. INIT.
		LATITUDE	LONGITUDE								
3141	JD 195	57/55/55	152/49/05	5.4	10				hrd		DRH
3142	JD 195	57/56/11	152/49/27	9.1	10				G		DRH
3143	JD 195	57/56/21	152/49/57	10.3	10				G		DRH
3144	JD 195	57/56/24	152/50/31	5.4	10				hrd		DRH
3145	JD 195	57/56/24	152/50/50	10.3	10				G, ~~smlP~~		DRH
3146	JD 195	57/56/33	152/51/11	7.6	10				G, ~~smlP~~		DRH
3147	JD 195	57/56/20	152/51/20	19.6	10				hrd		DRH
3148	JD 196	57/56/20	152/51/46	17.0	10				hrd		DRH
3149	JD 196	57/56/01	152/51/33	12.4	10				hrd		DRH
3150	JD 196	57/55/53	152/51/03	9.1	10				hrd		DRH
3151	JD 196	57/56/04	152/50/52	8.2	10				~~hrd~~, G		DRH
3152	JD 196	57/56/33	152/52/04	21.0	10				hrd		DRH

Use more than one line per sample if necessary.

☆ U.S. G.P.O. 1972-769-565/530 REG.#6

NOAA FORM 75-44
(11-72)

NOAA SHIP DAVIDSON S331

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

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

VESSEL	PROJ. NO.	YEAR		CHECKED BY	DATE CHECKED
LAUNCH 3132	~~OPR~~-P146-DA	81	DA10-1-81 (H9949)	RMA	30 JUNE 1981

~~FIX~~ ~~SERIAL~~ NO.	DATE	SAMPLE POSITION LATITUDE	SAMPLE POSITION LONGITUDE	DEPTH (Fathoms)	WEIGHT OF SAMPLER (LBS.)	APPROX. PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS. INIT.
4747	25 JUNE JD176	57/57/31	152/43/53	6.9	10				~~RKY~~ rky		BRH
4748	JD176	57/57/09	152/43/53	12.0	10				~~Rky~~ rky		BRH

Use more than one line per sample if necessary.

☆ U.S. G.P.O. 1972-769-565/530 REG. #6

NOAA FORM 75-44 (11-72)

NOAA Ship DAVIDSON S331

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

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

VESSEL	PROJ. NO.	YEAR		CHECKED BY	DATE CHECKED
3132 LAUNCH	OPR-P146-DA	81	DA 10-1-81 (H-9949)		30 JUNE 1981

FIX ~~SERIAL~~ NO.	DATE	SAMPLE POSITION LATITUDE	SAMPLE POSITION LONGITUDE	DEPTH (Fathoms)	WEIGHT OF SAMPLER 185.	APPROX. PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS. INIT.
4998	29 JUNE JD 180	57/57/18	152/43/16	11.8	10				~~Rky~~ rky		DRH
4999	JD 180	57/57/40	152/43/10	13.2	10			gy, bk ~~wht~~	fne S brk Sh		"
5000	JD 180	57/58/04	152/44/28	1.9	10			gy, bk	fne S		"
5001	JD 180	57/56/53	152/43/52	12.3	10				~~Rky, K~~, rky, ~~K~~ Wd		"
5002	JD 180	57/56/18	152/44/28	11.6	10			gy, bk	fne S		"
5003	JD 180	57/56/02	152/44/47	10.4	10				~~Smst~~ P, brk Sh		"
5004	JD 180	57/55/43	152/45/07	12.7	10			gy, bk	fne S brk Sh		"
5005	JD 180	57/55/32	152/45/29	8.8	10			gy, bk	fne S		"
5007	JD 180	57/55/19	152/46/01	11.2	10			gy, bk	fne S brk Sh		"
5008	JD 180	57/55/14	152/46/36	10.8	10				brk Sh, P		"
5010	JD 180	57/54/52	152/46/22	8.9	10				~~Rky~~ rky		"
5011	JD 180	57/54/11	152/47/05	14.6	10			dk gy	M, brk Sh		"
5012	JD 180	57/54/05	152/47/34	12.0	10			gy	M, brk Sh		"
5013	JD 180	57/54/28	152/47/15	11.8	10				brk Sh		"
5014	JD 180	57/54/19	152/47/48	11.6	10				brk Sh, P		"
5015	JD 180	57/54/39	152/47/57	10.6	10			dk gy	M, brk Sh		"
5017	JD 180	57/55/16	152/47/14	5.3	10				~~Smst~~ St, ~~Rky~~ ~~rky~~		"

Use more than one line per sample if necessary.

☆ U.S. G.P.O. 1972-769-565/530 REG.#6

NOAA FORM 75-44 (11-72)

NOAA SHIP DAVIDSON S331

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

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

VESSEL	PROJ. NO.	YEAR		CHECKED BY	DATE CHECKED
3132 LAUNCH	OPR-P146-DA	81	DA 10-1-81 (H-9949)	[illegible]	30 JUNE 1981

Fix ~~SERIAL~~ NO.	DATE	SAMPLE POSITION LATITUDE	SAMPLE POSITION LONGITUDE	DEPTH (Fathoms)	WEIGHT OF SAMPLER lbs.	APPROX. PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS. INIT.
5018	29 JUNE JD 180	57/55/21	152/47/40	11.5	10				~~Sand~~ St, ~~Rky~~ ~~rky~~		DH
5019	JD 180	57/55/15	152/48/02	11.9	10				~~Sand~~ St, ~~Rky~~ ~~rky~~		"
5020	JD 180	57/55/05	152/48/22	8.7	10				~~Rky~~ rky		"
5022	30 JUNE JD 181	57/54/46	152/46/16	15.2	10				~~Rky~~ rky		"
5023	JD 181	57/54/29	152/46/18	12.2	10				~~Rky~~ rky		"
5025	JD 181	57/54/41	152/45/51	10.1	10				~~Rky~~ rky		"
5028	JD 181	57/54/31	152/45/24	11.0	10			rd, ~~wht~~	Wd, ~~Rky~~ ~~rky~~ St		"

Use more than one line per sample if necessary.

☆ U.S.GPO:1978-765-092/1190 Region No. 6

NOAA FORM 75-44
(11-72)

NOAA SHIP DAVIDSON S331

OCEANOGRAPHIC LOG SHEET - M
BOTTOM SEDIMENT DATA

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

VESSEL	PROJ. NO.	YEAR		CHECKED BY	DATE CHECKED
LAUNCH 3132	OPR-P146-DA	81	DA-10-1-81		20 JUL 81

FIX ~~SERIAL~~ NO.	DATE	SAMPLE POSITION		DEPTH	WEIGHT OF SAMPLER (LBS.)	APPROX. PENETRATION	LENGTH OF CORE	COLOR OF SEDIMENT	FIELD DESCRIPTION	REMARKS (Unusual conditions, cohesiveness, dented cutter, stat. no., type of bottom relief i.e., slope, plain, disposition, etc.)	OBS. INIT.
		LATITUDE	LONGITUDE	(Fathoms)							
7336	JD 196	57/56/04	152/51/58	6.2	10				hrd		
7337	JD 196	57/55/51	152/50/41	10.3	10				hrd		
7338	JD 197	57/55/38	152/50/09	9.7	10				hrd		
7339	JD 197	57/56/00	152/49/58	21.2	10				hrd		
7340	JD 197	57/56/09	152/50/23	1.1	10				hrd		
7341	JD 197	57/55/47	152/49/41	20.7	10				hrd		
7342	JD 197	57/55/43	152/49/11	12.0	10				hrd		
7343	JD 197	57/54/53	152/47/22	17.2	10				hrd		

Use more than one line per sample if necessary.

☆ U.S. G.P.O. 1972-769-565/530 REG. #6

DAY #	LAUNCH	COMMENTS AND INITIALS OF OIC
169	3131	ROSS PAPER TAKE UP NOT WORKING ALSO QUESTION IF RATES ARE GETTING FROM MINI RANGER TO COMPUTER. GETTING NAV 02 ERROR. PICKED UP MINIRANGERS 002-KIZ 03-MANZ 4-SWIFT
		CHECKED ALL TIDE GAGES. Updated 3131 Cat? JRS
177-178 (~~176~~)	3131	Began cloudy & smooth & ended with moderate breeze and a 1 foot chop. Tachometer not working - fixed. plotter bed not rolling - diagnosed as a bad connection and fixed. computer mysteriously died 3 times. BAD I/O BOARD IN PLTR. pos #2004-2108
179/180	3131	10-1A calm seas, overcast, working in high current area. Training new coxwain. several computer problems - all solved by reloading. DA-1's computer needs a crash course at Evelyn Woods two week memory school. pos ~~2109~~ 2117 - 2257 LIFE VEST BLOCKING VENTS.
180	3131	10-1A Cloudy S-Werly winds to 15 Kt. MR problem w/CODE 3 - blown down - set up & 2 hydro lines run - shakey rates. Early AM calibration reflects this - No Hydro data collected before CODE 3 repositioned. problems with DA1s (steering meter HUNG BIT ON D/A CONVERTER) D/A 2260-2284
191	3131	10-1A Developments on PSR ITEMS and shoal areas in whale passage vicinity. Launch functioned well until after lunch the plotter went wild. It was thought to have been caused by the three martinis it consumed, but overheating was deemed to be the culprit by visiting ET. SAME LIFE VEST 2266-2385 CODE 1 ILKOGNAK, CODE 2 HALE, CODE 3 SAGE, CODE 4 UZKOS DLA
192/193	3131	10-1A Developments on PSR Items & Shoal Areas in Whale passage. Attacked by a six ton remora. Boat ran well 10-15 Kt winds ½ foot chop. Minor mini ranger rate fluctuations. 2386 - 2690 CODE 1 ILKOGNAK, CODE 2 SHAG?, CODE 3 SAGE, CODE 4 UZKOS
193/194	3131	10-1A MAINLINE HYDRO & SHORELINE BETWEEN UZKOS AND KONIUJI. NO BOAT PROBLEMS. CHANGED BATTERIES ON SAGE. SET UP KONIUJI LT MINI RANGER BUT NOT USED. (KONIUJI MINI RANGER OFFSET FROM LIGHT 1.8 METER, 300°) #2691-2893 UZKOS Code 4 → SAGE CODE 3
194/195	3131	Shoreline & Mainscheme Hydro on western most limit of sheet DA-10-1A-81 No Boat or computer problems. Position #'s 2894 → 3137 Koniuji Is LT - Code 5 Boom - Code 6 Krad - Code 2 DRH
195/196	3131	Least Depth Diving and Positioning on 89 FM Shoal just north of [illegible] Rk. Bottom Samples on Western limits of sheet DA-10-1A-81. Position #'s 3138 → 3152 (3138) Least Depth fix [illegible] - (1) Sage (3) Koniuji (5) Boom (6) [illegible] (2) DRH The boat [illegible] differences

FIELD SHEET # DA-10-1-81 (H-9949)

DAY #	LAUNCH	COMMENTS AND INITIALS OF OIC
196	3131	Least depth diving and positioning on 6⁷ and 4⁰ shoal areas just east of Ulcognak Rk. Development run on 13 FM shoal area NW of Ulcognak Rk. fix #'s 3153 - 3242 - 3241 (6⁷) 3242 (4⁰) Ulcognak (1) Sage (3) Uzkos (4) DRH
~~204~~ / 205	~~3131~~	~~MAINCCHEDULE ON 10~~ ~~CODE 1 KAZAKOF~~ ~~CODE 2 DEER~~ ~~CODE CHICK~~ DIA
217 / 218	3131	Ouzinkie Field Examination - R/R — no problems Fixes 2001 - 2194 Codes 2 + 3 on stations NOF2 + SMALL calibrated against Three Brothers Light - good results. SJK
218	3131	Ouzinkie Field Examination - R/R no problems Pos 2195 2284 Spent AM ~~develop~~ developing 1⁴ 5m sounding in Ouzinkie Narrows and afternoon doing splits on the 2 5m shoal in the northern development. SJK
219	313	Ouzinkie F.E. R/R Splits of 2⁰ shoal near Nun buoy "6" [illegible] Also Dives on 1⁴ sounding turned up two peaks 1² and 1⁶ goo positions - dive on 2⁰ shoal proved little — obtained DP with no check.
244	3131	707/719 Console RV Dive operations & B.S. no problems experienced. pos # 3163 - 3169 CODE 2 DEER CODE 3 CHICK CODE 4 KAZAKOF DIA

FIELD SHEET # DA-10-1-81 (H- 9949)

DAY #	LAUNCH	COMMENTS AND INITIALS OF OIC
164	3132	Console/R-T 716\709 malfunctioned; random rates and SS. Good Bar check. Replaced with 707/719. Calibration attempted & correctors observed consistently beyond baseline. Bad VIDEO PROCESSOR DIA
165/165	3132	Good sextant calibration. Consistent 7M (CODE 2); 5.5M (CODE 3) difference between daily system check correctors and Baseline calibration correctors. Calm water, sunny, unlimited visibility. Short event marks not present on fathometer, plotter not indicating soundings, but leaving a tick mark in place, plus the fix number. Fathometer problem corrected by ET early in day. Plotter problem still exists. 18.4 miles total, all high speed running, 2700 RPMs. (DA-10-1B-81, Pos. 4001-4123) Hydroplot controller control word 6 in LH, " " " " 10 in V.H. See RK112 PG. 18 DIA
166	3132	Sextant calibrations consistent with previous data. No Electronic problems to speak of. Calm, no sea or swell; overcast. Broke off early in case DA-1 needed assistance (DA-10-1B-81, Pos. 4124-4198) (DA 10-1A-81 Pos. 4199-4254) DIA
168	3132	CONSOLE/RT 716/709, Miniranger interference problem intermittently thruout the day. 10KT wind no swell ½ ft. of sea. Good sextant calibrations revealing MR-correctors that fluctuate (Code 3 & CODE 2 used) a significant number of meters from the baseline calibration. MR fluctuations unknown. Pos 4255 - 4399 DA10-1A-81
174 / ~~175~~	3132	Console/RT 716/709 - Weather conditions excellent during most of the day. Late afternoon fog/haze interfered somewhat w/ closing calibration. Control - 002/Code 2, 023/Code 3 - Problem with paper punch sprockets - Drive sprockets on drive motor rubbing on chasses. positions 4400 → 4512 - sheet DA-10-1B-81 - Shadows + Splits (DIA) Special sprocket set screw missing. Have none.
175/176	3132	Console/RT 709/716 Good weather. Electronics functioned well - no problems. Calibrations still a problem, although consistent with each net of signals. Main Engine battery died. Onan died. Had to jump start the boat. Pos 4513 - 4745 BLEW OUT HYDROPLOT & PDP8 DIA
176	3132	Console/R-T 716/709 Good Weather 24 Volt system problems - bad electrical connection - fixed, Onan overheats day ends. 2 Bottom Samples. 4747 - 4852 LOOSE TERMINAL BATTERY DIA
178/179	3132	Console/R-T 716/709 Weather conditions clear, no swell, smooth sea control still 002/CODE 2 023/CODE 3 M/R intermittent SS problem, CET solved problem (whatever it was). 4853 - 4997 Reseated VIDEO PROCESSOR. DIA

FIELD SHEET # DA-10-1-81 (H- 9949)

DAY #	LAUNCH	COMMENTS AND INITIALS OF OIC
180	3132	Bottom Samples # 4998 - 5028
181	3132	Range Azimuth on 10-1B-81 Logger not communicating with M\R at all. Rates manually recorded. Weather; partly cloudy 5-10kts wind. pos 5029 - 5096
189	3132	10-1A-81 USED CODE1 on ILKOGNAK ROCK(018) CODE2 on HALE(005) CODE3 on SAGE(006) and CODE4 on UZKOS(013) weather clear winds to 10 kts. Hydro was clean up from areas of bad rates from previous leg. pos 5097 - 5154 * NEW CONSOLE/R-T 716/709 DIA
190	3132	10-1A-81 Developments 1A, 1B, ILKOGNAK ROCK DEVELOPMENT & SHOAL East of ILKOGNAK ROCK DEVELOPMENT. USED. CODE 1 (ILKOGNAK ROCK), CODE 2 (HALE), CODE 3 (SAGE), and CODE 4 (UZKOS). Calibration by crossing the baseline and comparing both rates (combined) to the baseline distance see drawn printout. pos 5155 - 5402 716/709 console/R-T pair DIA
193/194	3132	10-1A Mainscheme to 45 M spacing. calm, no seas, light drizzle. Everything functioned properly. Donated our launch lunch containers contents as a sacrifice to hydrographic god aquaregia. Calibration by crossing the baseline worked extremely well 5403 - 5643 CODE 1 ILKOGNAK, CODE2 SHAG, CODE3 SAGE, CODE4 UZKOS DIA
194/195	3132	10-1A Developments over prior soundings and PSR items DFS. Mainscheme 45 meters. USED CODE 3, CODE 4, and CODE 5 ONLY. Fathometer analog becomming broken at end of day & digital as well. CODE1 ILKOGNAK CODE2 KRAD CODE4 UZKOS 5644 - 7024 CODE3 SAGE CODE5 KONIUJI CODE6 BARON DIA
195	3132	10-1A Filled in Holiday and completed X-Lines. Calm no sea no swell just swell everything worked CODE2 CODE3 CODE4 CODE5 CODE6 7025 - 7187 KRAD SAGE UZKOS KONIUJI BARON
196/197	3132	10-1A Developments calm overcast some drizzle Bottom samples CODE3 CODE4 CODE5 CODE6 7188 - 7343 SAGE UZKOS KONIUJI BARON DIA
197	3132	10-1B Back log by R\Az. Logger didn't work FA 181 didn't work but was quite creative. Hand logged all data ... lots of numbers. MINIRANGER CONSOLE STOPPED RECEIVING - RESEATED BOARD IN R-T & SYSTEM FUNCTIONED. No SYSTEMS CHECKS DUE TO INTENSE FOG 7344 - 7391 CODE4 BUOY DIA
220	3132	10-1A Least depths by divers CODE2 SAGE CODE3 UZKOS Plotter would not plot - otherwise, data acquisition 7392 - 7393 was good DIA

FIELD SHEET # DA-10-1-81 (H- 9949)

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

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS [illegible] 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)

☒ TO BE CHARTED ☐ TO BE REVISED ☐ TO BE DELETED	REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
	Photogrammetric Branch PMC, Seattle, WA	Alaska	Afognak and Kodiak Islands (Kupreanof Strait)	Oct. 27, 1982

The following objects HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
OPR-P146-DA/FA-81	PH-7017	TP-00310	North American Datum 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
LIGHT	(Koniuji Island Light 5) (Field Position)	57 55	49.380 1527.7	152 50	11.481 189.0		F-4-6-L 4 Aug. 1981	16594
LIGHT	Last Timber Point Light (Last Timber Point Light, 1954)	57 58	42.760 1323.0	152 58	52.994 871.0	71 M 165 4 July 1971	Triang. Rec. 27 June 1981	16594 off limits of survey

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

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

NONFLOATING AIDS ~~OR 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)

☒ TO BE CHARTED ☐ TO BE REVISED ☐ TO BE DELETED	REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
	Photogrammetric Branch PMC, Seattle, WA	Alaska	Afognak and Kodiak Islands (Whale Island)	Aug. 30 1982

The following objects HAVE ☒ HAVE NOT ☐ been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
OPR-P146-DA/FA-81	PH-7017	TP-00311	North American Datum 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE // D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE // D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
LIGHT	Ilkognak Rock Light 1 (Ilkognak Rock Light, 1954)	57° 54'	51.768 1601.6	152°46'	54.238 893.1		Triang. Rec. 4 Aug. 1981	16594
DAY BEACON	Whale Passage Daybeacon 4	57° 55'	27.615 854.4	152°47'	49.773 819.3		Triang. Rec. 4 Aug. 1981	16594

NOAA FORM 76-155
(11-72)

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

GEOGRAPHIC NAMES

SURVEY NUMBER

H-9949

Name on Survey	A ON CHART NO. 6594	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST TP-00310 K00311		
BIRD POINT	X								X	1
DIROVATI POINT	X								X	2
ILKOGNAK ROCK	X								X	3
INNER POINT	X								X	4
KODIAK ISLAND	X								X	5
KONIUJI ISLAND	X								X	6
MARMOT BAY	X								X	7
ORIENT POINT	X								X	8
POKATI POINT	X								X	9
SHAG ROCKS	X								X	10
UZKOSTI POINT	X								X	11
WHALE ISLAND	X								X	12
WHALE PASSAGE	X								X	13
YUZHNI POINT	X								X	14
ALASKA (Title)										15
										16
										17
					Approved:					18
										19
					Charles E. Harrington					20
					Chief Geographer - N/CG2x5					21
					15 June 1983					22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 77-27 (5-77)

U. S. DEPARTMENT OF COMMERCE NOAA

HYDROGRAPHIC SURVEY STATISTICS

HYDROGRAPHIC SURVEY NUMBER: H-9949

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

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	1	BOAT SHEETS & PRELIMINARY OVERLAYS	7
DESCRIPTIVE REPORT	1	SMOOTH OVERLAYS: POS. 6 ARC, 6 EXCESS	12

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES						
CAHIERS			2 raw P/O			
VOLUMES						
BOXES			2 - Smooth			

T-SHEET PRINTS *(List)* TP-00310, TP-00311

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		3423	3423
POSITIONS REVISED		2207	
SOUNDINGS REVISED			
SOUNDINGS ERRONEOUSLY SPACED			
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED			
	TIME – HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	17	*(VER)/(EVAL)	17
VERIFICATION OF CONTROL		05/05	10
VERIFICATION OF POSITIONS		70/05	75
VERIFICATION OF SOUNDINGS		182/16	198
COMPILATION OF SMOOTH SHEET		62/00	62
APPLICATION OF TOPOGRAPHY		02/00	02
APPLICATION OF PHOTOBATHYMETRY		00/00	00
JUNCTIONS		00/01	01
COMPARISON WITH PRIOR SURVEYS & CHARTS		06/29	35
VERIFIER'S REPORT		04/23	27
OTHER		00/10	10
TOTALS	17	331/89	437

Pre-Verification by James S. Green	*Beginning Date* 2/6/82	*Ending Date* 2/9/82
Verification by Charles R. Davies; Evaluation by Gordon E. Kay	*Beginning Date* 4/1/82 4/18/83	*Ending Date* 2/24/83 5/6/83
Verification Check by James L. Stringham, James S. Green	*Time (Hours)* 63	*Date* 5/23/83
Marine Center Inspection by HIT	*Time (Hours)* 6	*Date* 6/6/83
Quality Control Inspection by ~~James S. Green~~	*Time (Hours)*	*Date*
~~*Requirements Evaluation*~~ Examination *by* S Baumgardner	*Time (Hours)* 100	*Date* ~~4/20/84~~ 5/30/84 gm

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

Exam. Approved: [signature] 6/1/84

PACIFIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO: H-9949 FIELD NO: DA-10-1-81

Alaska, Marmot Bay, Whale Passage and Vicinity

SURVEYED: June 14 - July 30, 1981

SCALE: 1:10,000 PROJECT NO: OPR-P146-DA,FA-81

SOUNDINGS: Ross Fineline Model 5000
Diver

CONTROL: Range/Range
Range/Azimuth
Mini-Ranger

Chief of Party.....CDR N. C. Austin

Surveyed By.....LCDR D. R.Seidel
LT D. A. Dreves
LTJG D. Actor
LTJG D. Herlihy

Automated Plot By.....PMC Xynetics Plotter

Verified By.....Charles R. Davies

Evaluated By.....Gordon E. Kay

1. INTRODUCTION

H-9949 is a basic hydrographic survey conducted by the NOAA Ship DAVIDSON, in accordance with Project Instructions OPR-P146-DA,FA-81, Shelikof Straits, Alaska, dated February 6, 1981 and the following changes: Change No. 1, April 21, 1981 and Change No. 2, May 6, 1981. This survey is a continuation of the DAVIDSON 1980 work in Shelikof Straits and is situated in Whale Passage between Shelikof Straits and Marmot Bay.

During 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 listing.

c. Tide level values used on H-9949 are from observed tides (see 77-12 on following separate).

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

The digital records for this survey has been updated to include all categories of information required to comply with N/CG letter, Policy Certification and Delivery of Hydrographic Surveys, December 17, 1982.

2. CONTROL AND SHORELINE

Horizontal control and hydrographic position control are adequately discussed in paragraphs F and G of the ship's Descriptive Report. Additional information is contained in the Electronic Control Report OPR-P146-DA-81 and the Horizontal Control Report, OPR-P146-DA-81.

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

The shoreline comes from the following unreviewed Class III manuscripts:

Number	Scale	Date of Photography	Date of Field Edit
TP-00310	1:20,000	July 1971	June - August 1981
TP-00311	1:20,000	July 1971	June 1981

Since field edit has been completed and applied to the manuscripts within the limits of hydrography, the shoreline on the smooth sheet is shown in black.

3. HYDROGRAPHY

Soundings at crosslines are in very good agreement. The hydrography contained within this survey, H-9949, is excellent to determine the bottom configuration and least depths.

Standard depth contours were adequately drawn and developed with the exception of the 0-fathom contour where hydrography was terminated due to foul with rocks limit.

4. CONDITION OF SURVEY

The hydrographic records and final reports adequately conform to the requirements of the Hydrographic Manual, July 4, 1976 edition.

5. JUNCTIONS

There are no junctioning contemporary surveys around the area limits of H-9949, nor were any other junctions required by Project Instructions OPR-P146-DA,FA-81, paragraph 6.9.

6. COMPARISON WITH PRIOR SURVEYS (See Examination Item 5)

H-9949 was compared to the following prior surveys:

H-2926 (1907) 1:20,000 does not compare well with H-9949. This survey, H-2926, was already superseded by H-8118 (1954) 1:10,000, over their common areas in Whale Passage. This is the same area covered by H-9949. A comparison is made with H-8118 (see section 7 of this report).

H-2927 (1907) 1:20,000 does not compare well with H-9949. Present survey soundings are shoaler (see ship's descriptive report, paragraph K). These differences are attributed to differences in data acquisition and positioning methods of the prior. H-9949 is adequate to supersede H-2927 over their common areas.

H-5437 (1933) 1:20,000 compares well with H-9949. Differences are approximately within one fathom. Due to age and improved data acquisition methods, H-9949 is adequate to supersede H-5437 over their common areas.

H-5438 (1933) 1:20,000 ~~compares well~~ is in fair agreement with H-9949. Differences are approximately within one fathom. Due to age and improved data acquisition methods, H-9949 is adequate to supersede H-5438 over their common areas.

H-8118 (1954) 1:10,000 is in fair agreement with H-9949. See ship's descriptive report, paragraph K, for specific details on the comparison.

As a result of the general subsidence in Whale Passage, noted in the above referenced paragraph of the ship's descriptive report, several shoal depths on H-8818 were not found on the survey. Dive investigations on several of these confirm the deeper depth shown on this survey.

A total of five rocks and one reef have been transferred from H-8118 in red onto H-9949. They are as follows:

	Feature	Elevation	Latitude	Longitude
	rock	* (9)	57°54'46"N	152°48'00"W
	rock	* (8)	57°54'44"N	152°48'01"W
	rock	* (4)	57°54'32"N	152°47'59"W
*	rock	* (5)	57°54'35"N	152°47'25"W
*	rock	* (2)	57°54'33"N	152°47'20"W
	reef	(7)	57°55'55"N	152°51'45"W

The transfer of these features onto H-9949 makes H-9949 adequate to supersede H-8118 over their common areas.

* These two rocks were transferred from H-8118 to more completely portray the area around Shag Rocks. Shag Rocks should be charted according to this survey.

FE-128 (formerly FE #7) 1:10,000 (1954) Wire Drag. There are two "cleared to depths" on H-9949 which are tabulated as follows:

See Examination Rpt Item 5

Latitude	Longitude	FE-128	Charted	H-9949
57°55'01"N	152°46'36"W	18 ft.	3.1 fm.	3.9 fm.
57°54'51"N	152°46'24"W	14 ft.	2.25 fm.	3.8 fm.

H-9949 depths were obtained by dive investigation, and these depths are shown on the smooth sheet.

7. COMPARISON WITH CHART

Chart 16594, 9th Edition, Dec. 30/75 1:78,900. The soundings on the chart come from the before mentioned prior surveys (see enclosed chartlet). The foreshore and nearshore ledges come from H-2926 (1907) 1:20,000.

a. Hydrography - The charted soundings are slightly shoaler than the present survey H-9949. The general trend of subsidence is attributed to the March 1964 earthquake (see ship's descriptive report, paragraph L). No major discrepancies are noted between soundings. For a complete and adequate chart comparison, refer to paragraph L of the ship's descriptive report supplement as follows:

A charted 8 fathoms shoal depth off of Derovati Point located at latitude 57°55'36"N, longitude 152°45'12"W was determined on H-9949 to be correct and consistent with depths found on this survey.

All offshore charted rocks were located during the course of this survey, with the exception of the five rocks and one reef previously mentioned in section 6. See Examination Rpt, Item 5

In addition, Chart 16594, 10th Edition, July 4/76 1:78,900 inset at 1:30,000 was released concurrently as survey operations on H-9949 were progressing. The charted soundings are in fathoms and feet to eleven fathoms. The source of soundings is the before mentioned prior survey H-8118 (see section 6 for comparison). Offshore features and ledges are not shown on this inset. For a complete and adequate chart inset comparison refer to attachment to paragraph L in the ship's descriptive report supplemented as follows:

A charted reef at 57°55'55"N, 152°51'45"W was transferred onto the smooth sheet in red from H-8118 (see section 6).

On the chart, in Whale Passage are numerous "Tide Rip" notes. These notes should be retained on the chart.

H-9949 is adequate to supersede the charted inset and chart 16594 over their common areas.

b. Controlling Depths - There are no controlling depths contained within the limits of H-9949.

c. Aids to Navigation - There are three fixed aids and one floating aid on H-9949. The fixed aids follow:

Light List Name	Latitude N	Longitude W
Ilkognak Rock Light 1	57°54'51.80"	152°46'54.22"
Konirji Rock Light 5	57°55'49.38"	152°50'11.48"
Daybeacon 4	57°55'27.61"	152°47'49.77"

The above fixed aids adequately mark the features intended.

The floating aid within the survey limits is Yuzhni Point Buoy 2 at latitude 57°55'07.30"N, longitude 152°46'29.63"W. This buoy is presently located near Ilkognak Rock shoal on the opposite side of the channel from Yuzhni Point. At this location the buoy marks the shoal and not the point as the light list

implies. This discrepancy has been pointed out to the U. S. Coast Guard in a "Danger to Navigation" letter dated June 6, 1983 (see attachment).

There is one numbered presurvey review (item #7) and six dashed areas for investigation. All dashed areas and item #7 have been adequately discussed in the ship's descriptive report, paragraph K.

Note: Presurvey review item #7 was apparently listed with the wrong longitude (2' off) in the project instructions. This located item #7 (a wreck) 800 feet up a mountainside. The ship used the correct charted position in lieu of the project instructions position.

8. COMPLIANCE WITH INSTRUCTIONS

H-9949 adequately complies with the project instructions and amendments listed in section 1 of this report.

9. ADDITIONAL FIELD WORK

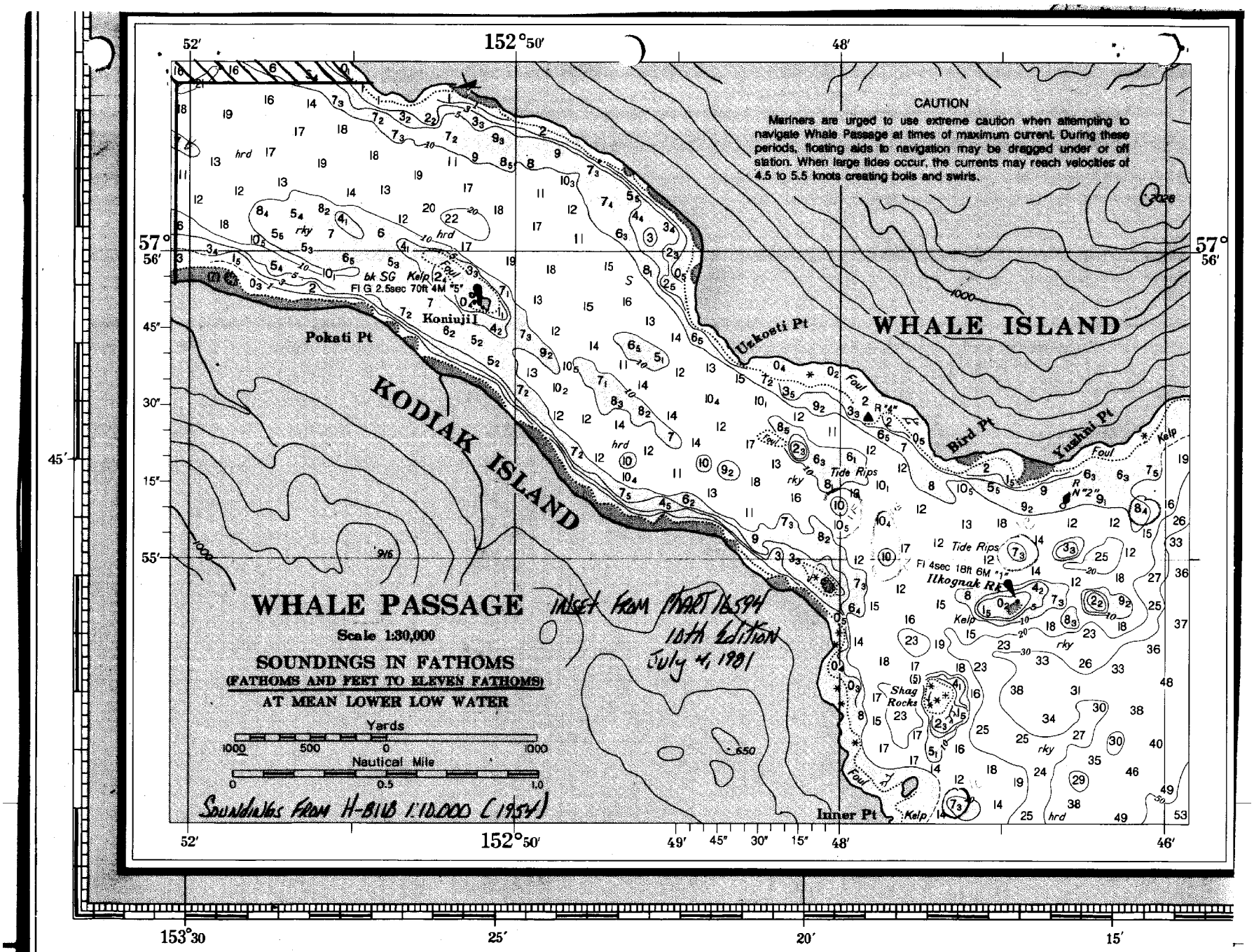
H-9949 is a good basic hydrographic survey. Additional field work is neither recommended nor required at this time. See Examination Rpt, Item 3

Submitted by,

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-9949, is recommended for approval.

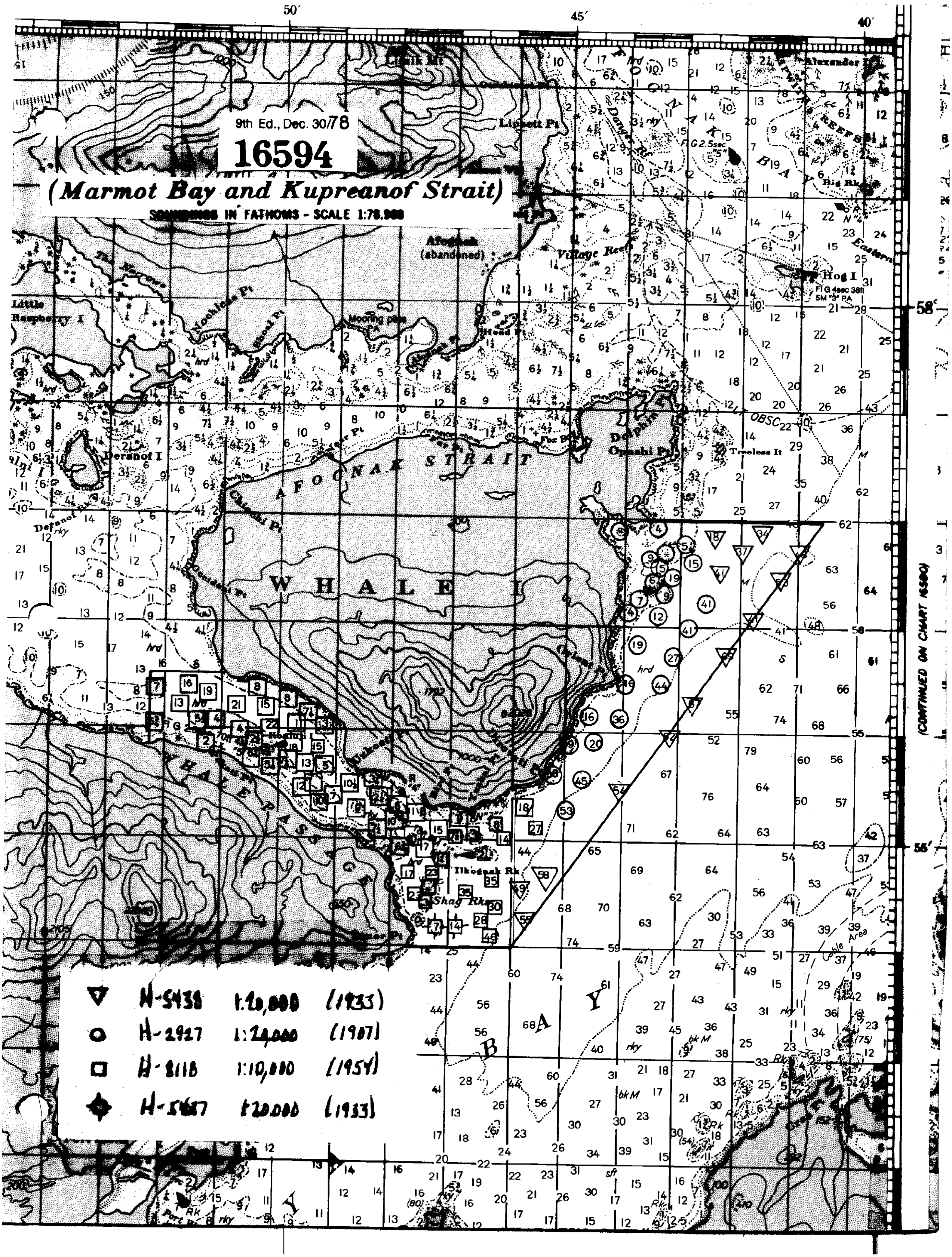
James S. Green
Supervisory Cartographer



CAUTION

This chart has been corrected from the Notice to Mariners published weekly by the Defense Mapping Agency Hydrographic/Topographic

SOUNDINGS IN FA


9th Ed., Dec. 30/78
16594
(Marmot Bay and Kupreanof Strait)
SOUNDINGS IN FATHOMS - SCALE 1:78,900
50′
45′
40′
58°
56′
Afognak (abandoned)
Village Reef
Hog I
Eastern
Big Rk
Alexander
Liplett Pt
Little Raspberry I
The Narrows
Nooklees Pt
Mooring piles
Head Pt
AFOGNAK STRAIT
Dolphin Pt
Ogmahi Pt
Treeless It
Deranof I
WHALE I
WHALE PASSAGE
Ilkognak Rk
Shag Rks
Cable Area
B A Y
(CONTINUED ON CHART 16580)
H-5438 1:20,000 (1933)
H-2927 1:20,000 (1907)
H-8118 1:10,000 (1954)
H-5467 1:20,000 (1933)

DATE: April 30, 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 945-7332 Kizhuyak Point, AK
945-7376 Uzkosti Point, AK

Tide Station Used (NOAA Form 77-12):

Period: June 14 - August 8, 1981

HYDROGRAPHIC SHEET: H-9949

OPR: P146

Locality: Whale Passage, Alaska

Plane of reference (mean lower low water): 945-7332 = 5.2 ft.
945-7376 = 6.5 ft.

Height of Mean High Water above Plane of Reference is 945-7332 = 8.7 ft.
945-7376 = 11.0 ft.

REMARKS: Recommended Zoning:

See Next Page

Chief, Tidal Datums and Information Branch

1. East of a line formed by 2 points located at:

57°55.6'	57°54.2'
152°45.5'	152°47.8'

Zone Direct on 945-7332

2. West of the previous line to a line formed by 2 points located at:

57°55.6'	57°55.1'
152°48.9'	152°49.4'

Use Automatic (multi-gage) zoning, using 945-7376, and 945-7332, at the Psuedo gage location.

NOTE: Create a Psuedo gage at coordinates 57°54.8' and 152°46.7', using all data from 945-7332 Kizhuyak Point, Alaska tide gage, in the automatic zoning scheme. No significant differences in times or heights is expected between the actual location of the tide gage, and the location of the Psuedo gage.

3. From the line formed by 2 points located at:

57°55.6'	57°55.1'
152°48.9'	152°49.4'

to a line formed by 2 points located at:

57°56.1'	57°55.4'
152°48.9'	152°49.9'

Zone direct on 945-7376

4. West of the previous line to a line formed by 2 points located at:

57°56.4'	57°55.7'
152°50.0'	152°50.9'

Zone direct on 945-7376 and apply x1.04 range ratio.

5. West of the previous line to a line formed by 2 points located at:

57°56.6'	57°55.8'
152°51.2'	152°52.3'

Zone on 945-7376, and apply +15 minute time correction and x1.09 range ratio.

6. West of the previous line to a line formed by 2 points located at:

57°57.5'	57°56.1'
152°51.8'	152°54.1'

Zone on 945-7376, and apply +15 minute time correction and x1.15 range ratio.

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

June 13, 1983

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

Dear Sir:

A review of verified hydrographic survey H-9949, Alaska, Marmot Bay, Whale Passage and Vicinity, indicates the following changes affecting NOAA Chart 16594. The indicated depths are reduced to MLLW.

1. A 4.7 fathom sounding supersedes a 5 fathom 1 foot sounding at latitude 57°55'39"N, longitude 152°49'07"W.

2. A 6.0 fathom sounding supersedes the 7 fathom 3 foot sounding at latitude 57°54'10"N, longitude 152°47'20"W.

3. A 6.8 fathom sounding is in an area charted at 10 fathoms at latitude 57°55'08"N, longitude 152°46'16"W.

4. Yuzhni Point Buoy 2, at the time of the survey, was located at latitude 57°55'07"N, longitude 152°46'30"W. An extract from H-9949 of this area is appended for your information.

5. A 7.2 fathom sounding supersedes an 8 fathom 4 foot sounding at latitude 57°55'08"W, longitude 152°46'08"W.

6. A 5.5 fathom sounding is in an area charted at 7 fathoms 2 feet at latitude 57°56'24"W, longitude 152°50'25"W.

7. The charted reef area centered at latitude 57°57'21"N, longitude 152°43'36"W should be extended to latitude 57°57'13"N to the south, latitude 57°57'25"N to the north and longitude 152°43'47"W to the west.

Any questions regarding the above items may be directed to Cdr. Ned C. Austin, Chief, Nautical Chart Branch, telephone (206) 442-4764.

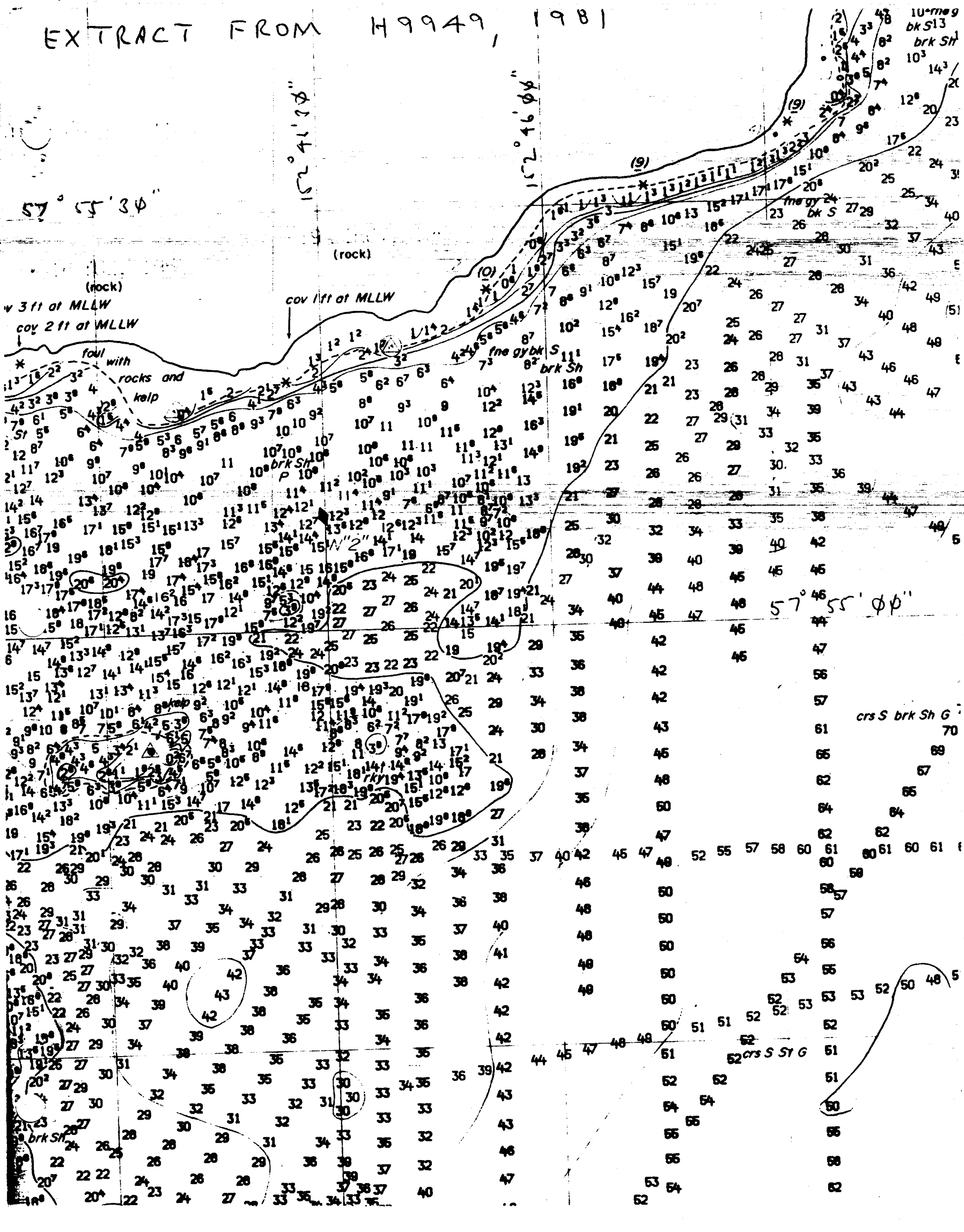
Sincerely,

K. W. Jeffers
for Charles K. Townsend
Rear Admiral, NOAA
Director, Pacific Marine Center

Enclosure

bc: N/CG222

EXTRACT FROM H9949, 1981



ATTACHMENT TO DESCRIPTIVE REPORT FOR H-9949

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.

Neil C Austen 11/2/83
Chief, Nautical Chart Branch (Date)

CLEARANCE:

SIGNATURE AND DATE:

N/MOP2:RLSandquist Robert L. Sandquist ~~9/1/83~~ 11/2/83 NOAA

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.

Charles K Tennent 11/2/83 NOAA
Director, Pacific Marine Center (Date)

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

N/CG242:SRB

November 20, 1984

TO: N/CG24 - Roy K. Matsushige RKM

FROM: N/CG242 - George K. Myers, Jr. George K. Myers, Jr.

SUBJECT: Examination of Hydrographic Survey H-9949 (1981), Alaska, Marmot Bay, Whale Passage and Vicinity

Chief of Party ..... N. C. Austin
Field Unit ..... NOAA Ship DAVIDSON
Processed by ..... Pacific Marine Center
Examined by ..... S. R. Baumgardner

An examination of hydrographic survey H-9949 (1981) was accomplished to monitor the survey for adequacy with respect to data acquisition, conformance with applicable project instructions, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, smooth plotting, shoreline transfer, digital data standards, decisions made and actions taken by the evaluator, and the cartographic presentation of data.

Cartographic deficiencies and constructive comments are noted on a ½-scale copy of the survey smooth sheet which will be forwarded to the marine center. Digital data and/or programming deficiencies are identified on a full-scale plot made from the magnetic tape transmitted by the marine center. This plot will also be forwarded to the marine center.

In general, the survey was found to conform to National Ocean Service standards and requirements except as stated in the Evaluation Report and as follows:

1. With reference to the hydrographer's portion of the Descriptive Report, sections of Paragraph K, Comparison with Prior Surveys, and Paragraph L, Comparison with Chart, are redundant and confusing in that specific features originating with the prior surveys are discussed in as many as three different sections of these two paragraphs. The bulk of the comparison should have been addressed under paragraph K, as all of the charted data, with the exception of one rock, originated with the prior surveys. NC

2. The 0-fathom depth curve is misrepresented in the vicinity of latitude 57°58'02"N, longitude 152°44'25"W. The excess sounding overlay contained several positive and negative soundings in this area that were not considered. NC

3. See hydrographer's attachment to Section L, Comparison with the Chart, page 2:

Paragraph 2

The verifier concurs with the hydrographer's recommendation; however, the smooth sheet is not in agreement. The rocks should be brought forward (see item 5 of this examination) and the reef charted as portrayed on the present survey.

Paragraph 5

The hydrographer's recommendation should be disregarded as the development and the main-scheme hydrography did not cover the 7-fathom shoal as stated. The 7-fathom shoal, charted in latitude 57°56'22"N, longitude 152°52'05"W, from H-8118 (1954), should be retained as it falls outside the limits of the present survey. Shoal retained

In addition, the survey limits should have been extended in this area as both the prior and present surveys have isolated shoal soundings which were not developed.

4. The following items were either not transferred or transferred incorrectly to the present survey from photogrammetric shoreline maps TP-00310 and TP-00311.

The dashed kelp limits, located in latitude 57°56'26"N, longitude 152°50'00"W, were not applied.

The dashed foul limits, located in the vicinity of latitude 57°54'59"N, longitude 152°48'10"W, were not properly applied.

Two rocks awash were not applied from the shoreline map within the limits of the reef located in latitude 57°57'20"N, longitude 152°43'35"W.

The ledge, located in latitude 57°58'12"N, longitude 152°44'36"W, should be deleted and a rock awash (1) applied from TP-00311. The ledge originated with the final field sheet; however, it could not be verified in the field records and is discredited by a sounding line on the present survey.

5. The following additions to section 6 of the Evaluation Report are required to supersede the prior surveys listed below.

H-2927 (1907)

A rock awash, located in latitude 57°57'53"N, longitude 152°44'09"W, was neither verified nor disproved and should be carried forward to the present survey. The hydrographer's recommendation in section L, paragraph 3, to delete this rock should be disregarded; no specific investigation was conducted.

Restored rock awash per examiners recommendation
10/5/67

H-8118 (1954)

In order to supersede this prior survey the following soundings and rocks should be carried forward to the present survey.

	Latitude (N)	Longitude (W)
10 fathom	57°54'49.5"	152°46'36.0"
9.3 fathom	57°54'48.0"	152°46'36.0"
rock awash	57°54'31.5"	152°47'26.0"
rock awash (5)	57°54'54.0"	152°48'03.0"
rock awash	57°54'56.0"	152°48'09.5"
rock awash	57°54'56.5"	152°48'09.0"
3.1 fathom	57°54'58.0"	152°48'07.0"
5.2 fathom	57°55'00.0"	152°48'05.0"
3.8 fathom	57°55'00.5"	152°48'22.0"
4.5 fathom	57°55.32.5"	152°48'19.0"
5 fathom	57°55'45.0"	152°50'07.0"
5.6 fathom	57°55'47.0"	152°50'19.0"

A subsidence corrector of 4 feet or .7 fathom has been incorporated in the above and should also be applied to the rock and reef elevations brought forward by the evaluator. This corrector was determined from a research paper entitled "Vertical Displacements Determined by Surveys After the Alaskan Earthquake of March 1964" by James B. Small and Lawrence C. Wharton, which is contained in "The Prince William Sound, Alaska, Earthquake of 1964 and Aftershocks," Volume III, U.S. Department of Commerce.

FE-128 (1954) WD

The evaluator's comparison of the above prior wire-drag survey should be superseded with the comparison below. As presently stated, it is confusing, uses erroneous survey depths, and does not conform to the standard comparison format for wire-drag surveys.

Effective drag depths on this survey do not conflict with depths on the present survey.

The detached soundings listed below were brought forward from this survey to H-8118 (1954) and are superseded by diver investigations on the present survey.

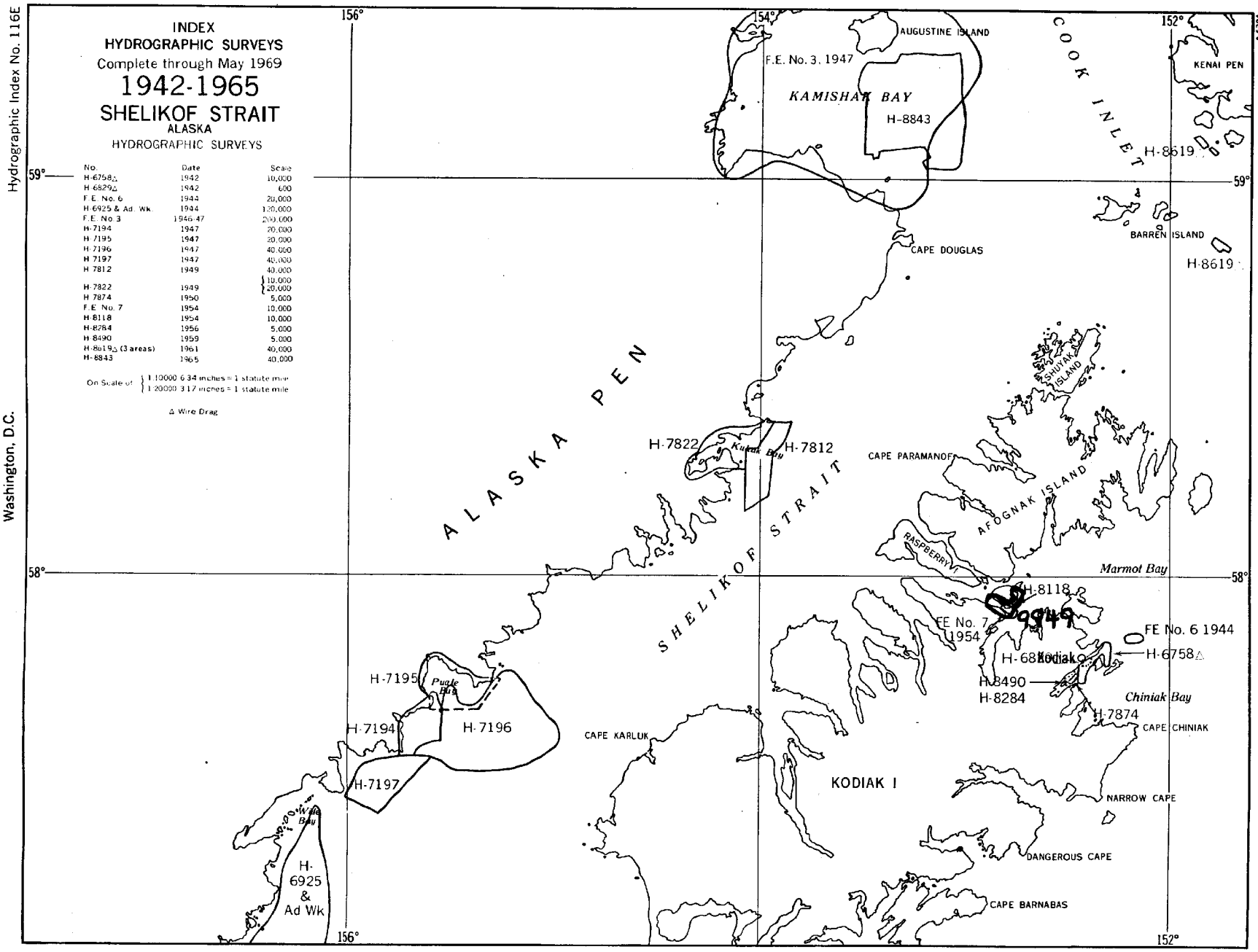
FE-128 WD		H-8118	Latitude (N)	Longitude (W)
14 feet	=	2.3 fathoms	57°54'51.5"	152°46'25"
21 feet	=	3.5 fathoms	57°55'02"	152°46'36"
22 feet	=	3.7 fathoms	57°55'01"	152°46'37"

6. The 3.9-fathom sounding plotted at latitude 57°55'02"N, longitude 152°46'35"W was diver investigated and described in sounding volume as rock shoal. Label Rk should be appended to sounding on smooth sheet and digital records changed.

7. The Evaluation Report, section 3, states standard depth curves are adequately developed except the 0-fathom curve. However, an examination of the sheet also reveals that the 1-, 2-, and 3-fathom curves cannot be completely drawn.

8. The Evaluation Report, section 7, recommends that the charted "Tide Rips" should be retained on the chart. The "Tide Rips" notes originate with H-8118, and should have been brought forward appropriately to present survey and added to the digital data.

9. The note "submerged ledge," located in latitude 57°57'15'N, longitude 152°44'09"W, is incorrect. On the field sheet, in red, the hydrographer portrayed a ledge, awash at MLLW. This symbolization should have been used by the verifier on the smooth sheet. The dashed limit line offshore of the ledge represents the limit of an area foul with rocks and kelp.



H-9949 Master Diagram No. 8556-3

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9949

INSTRUCTIONS

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

CHART	DATE	CARTOGRAPHER	REMARKS
16594	12-23-85	R. Sachs	Full ~~Part Before After Verification Review Inspection Signed Via~~
			Drawing No. 15
16580	12-24-85	R Sachs	Full ~~Part Before After~~ Verification Review ~~Inspection Signed Via~~
			Drawing No. 20
531	12-24-85	R. Sachs	Full ~~Part Before After Verification~~ Review ~~Inspection Signed Via~~
	NO CORRECTION		Drawing No. 19
			one-Evaluation - Examination
16594	10/22/87	N.J. Bonanno Jr	Full Part Before After Verification Review Inspection Signed Via
			Drawing No. Fully appld corrections recommended in examiners report dated 11/20/86 only
			Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
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			Drawing No.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.

USCOMM-D