6940

Additional work 1944

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC SHEET

Field No. H-6940a *Office No.* 6940

LOCALITY

State ALASKA

General locality ALEUTIAN ISLANDS, MASSACRE BAY

Locality ATTU ISLAND.

1944.

CHIEF OF PARTY

Roland D. Horne

LIBRARY & ARCHIVES

DATE JAN 20 1945

B-1870-1 (1)

6940

Additional work 1944

Form 537
11—5812

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H6940 Additional work 1944

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. H-6940a

REGISTER NO.

State ALASKA

General locality ALEUTIAN ISLANDS

Locality MASSACRE BAY - ATTU ISLAND

Scale 1:10,000 Date of survey Summer, 1944.

Vessel EXPLORER - Launches No. 1 and No. 2.

Chief of Party Roland D. Horne

Surveyed by H.O. Fortin and J. E. Schultz

Protracted by B. Caddage

Soundings penciled by B. Caddage

Soundings in fathoms and feet

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by G. R. Shelton

Inked by R.H. Carstens

Verified by R.H. Carstens

Instructions dated March 25, 1944.

Remarks:

GPO

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET H-6940a (Launch)

DATE OF INSTRUCTIONS:

Instruction dated March 25, 1944, Project CS - 218.

SURVEY METHODS:

Standard survey methods were used throughout this sheet. The control was based on triangulation executed by the U.S. Navy (Hydrographer 1943). Additional signals were located by the Ship EXPLORER, 1944

The purpose of this survey was to complete sheet H-6940 which was started by the Hydrographer in 1943.

The 808 depth recorder was used with bar checks made daily. Vertical casts were taken with leadlines over critical areas of the survey, and bottom characteristics were noted at the same time.

The Serial Temperature which was taken on June 29, 1944 in Massacre Bay is to be used in this area.

COMPARISON WITH PREVIOUS SURVEYS:

There were discrepancies noted between the surveys made this year by the Ship EXPLORER and those of 1943 by the Hydrographer. It is recommended that wherever discrepancies occur the 1944 work of the EXPLORER be accepted, unless further development and investigation is noted.

DISCREPANCIES: AND RESULTS OF ADD'L WORK

Item	Latitude	Longitude	Position	Fathoms	Date	Remarks
#1	52° 48.68'	173° 12.48' E	4b,5b	~~rock~~	~~1943~~	P 18 DR. 1943
				9½ fms.	1944	470
			7-8b	~~12~~ 6 fms.	1944	~~450~~ M. to N.W.
			4-6b	8½ fms.		80 M. to ~~N.N.W.~~ NE

Item	Latitude	Longitude	Position	Fathoms	Date	Remarks
#2	52°48.26'	173° 13.34 E.		2 rocks awash	1943	p. 18 DR. 1943 ← shown in pencil only, removed
			47b	21 fms.	1944	
	52°48.00'	173° 13.55 E.	55b - 60b	2 rocks	1944	true position of above rocks.
	Disproved sunken rock in ϕ 52° 48'+65m; λ 173° 13'+564m.					
#3	52°48.83'	173° 17.34 E.		rock, sunken	1943	p. 18 D.R. 1943
	Disproved. Removed breaker note on smooth sheet. Delete charted "+".		156c	9¾ 10 fms.	1944	no rock here.
			96c	½ 5/6 fms.		180 ~~300~~ M. S.E. of above.
#4	52°47.89'	173° 12.95 E.		rock, sunken	1943	p. 18 D.R. 1943
	Disproved. Delete from chart (was not inked on smooth sheet)		95b to 96b	6¾ fms	1944	no rock here.
			86b " 90b	2 fms		150 M. to S.E. of above position.
#5	52°48.58'	173° 11.18 E.	76a to 78a	rock, sunken	1944	p. 17 DR 1943
	1944 rock on west agrees with T-6960 (1944) and was located at a 1½' tide. other rock located at a tide of ½' below MLLW. Pathfinder of pos. 71-72 a (1944) could be read as kelp or side echoes here. Both rocks retained.					sunken rock 100 M. to S.E. ~~south~~ of position on 1943 work. (pos 104 + 111, red)
#6	52°48.50'	173° 12.28 E.	125a to 128a	sunken rock	1944	not on 1943 boat sheet.
#7	52°49.08'	173° 15.45 E.	47c to 49c	1¾ 5/6 fms.	1943	p 16, D.R. 1943
	Reject, 1½ fms, includes kelp. Chart 1⅝ fms.			2-1/6 fms	1944	handlead
				~~1-1/6 fms~~	~~1944~~	~~machine, just south of above.~~
	Retain 3¾ fms., not sufficiently disproved. no drifting nor feeling around with handlead		28 c c	5½ fms	1944	260 M. W.S.W. of above.
				3-/3/4 fms		chart from 6cm15 of REVIEW 1943
	5½ fms. considered disproved, no evidence of shoaling			16 fms	1944	480M. W.S.W. of above position
				5-1/2 fms		chart. from 6cm14 of REVIEW 1943
#8	52°48.81'	173° 17.58 E.	153c to 155c	rock awash	1944	
	Delete charted "+" here, chart "*" in slightly revised pos. Delete charted "*" in ϕ 52° 48.85', λ 173° 17.67. - same rock as above and plotted in error on T-6960			rock sunken	1943	130 ~~160~~ M. to N.E. of above position not there.

Item	Latitude	Longitude	Position	Fathoms	Date	Remarks
#9	52°48.60'	173° 11.90 E	96b to 97b	7 fms	1944	
				5-2/6 fms	1943	P 17, DR 1943
	Chart 5½ fms, delete charted 4¾ fms. (same sdg. line 183-184 cc, but estimated reducer applied)			6½ fms	1944	60 M. to S. of above position.
#10	52°47.90'	173° 11.50 E	38 to 39a	4-5/6 fms	1944	P 17, DR 1943
				2-2/6 fms	1943	← Retain. Not retained - considered disproved - original reading made on kelp markings. RHC 4/20/45
	Retain 1⅚ (may be kelp) φ 52°47.89, λ 173°11.42			3-5/6 fms	1944	100 M. S.W. of above. P 17, DR 1943
				1-5/6 fms	1943	
				4-2/6 fms	1944	350 M. S.W. of above.
				4 fms	1943	
	Retain 1⅚ (may be side echo) φ 52°47.82 λ 173°11.3			4-1/6 fms	1944	270 M. S.W. of above. P 17, DR 1943
				1-2/6 fms	1943	
	φ 52°47.87 λ 173°11.22			sunken rock, ½ fms (30 m. N of RR)	1943	310 M. W.S.W. of above position ~~is correct.~~
				rock	1944	
	Chart sunken rock ~~2 fms~~, delete ¼ fms. φ 52°47.87 λ 173°11.24			1-1/4 fms	1944	310 M. W. of above.
				1/4 fms	chart 1943	boat sheet value
#11	52°48.36'	173° 13.00 E		20 fms	1944	
				19 fms	1943	
#12	52°47.80'	11.~~55~~ 43 E		9-1/4 fms	1944	
				8-1/2 fms	1943	chart shows 3-3/4 fms. OK
	Retain 3¾ fms, sounding at drag grounding on H-6941 (1943) WD					
#13	52°47.50'	173° 12.83 E		5 fms	1944	
				1-~~2~~/6 fms	1943 (from H-6939, 1948) OK	
			119b	1 fms	1944	65 M. N.N.E. of above.
#14	52°49.45'	173° 14.78 E	8c to 9c	9-1/2 fms	1944	
				10-1/2 "	1943	
#15	52°51.34'	173° 13.91 E	120e to 121e	1-1/6 fms	1944	
				1 fms	1943	← chart ⅚ fms. just north
	52° 51.40	173° 13.92	130e	1 fms	1944	hand lead.
	Chart ⅚ fms. near here			⅚ ~~1/2 fms~~	1943	100 M. N. of above position.

Item	Latitude	Longitude	Position	Fathoms	Date	Remarks
#16	52°51.53'	173° 13.38'E	93e to 98e	2-2/6 fms	1944	hand lead
				2-1/6 fms	1943	chart 2 fms.
			30e to 31e	3-1/2 fms	1944	280 M. S.W. of above position.
	52° 51.48	173° 13.14	chart	2-1/2 fms	1943	original sdg of 1½ taken on R&IB.

L 15, DR 1943

#17 It is believed that this sheet is complete within the limits of the area covered by this survey, except for a small area around the reef at signal VEK, latitude 52° 50.19', Longitude 173° 12.30'. The 2-1/2 fathom sounding between positions 30e to 31e just N.E. of the Army piers, and the 1-5/6 fathom sounding at Latitude 52° 47.89', Longitude 173° 11.45'. The later areas should be wire dragged.

1½ fm is considered disproved by hydrography

Additional bottom characteristics should be done on this sheet. However, this could be done on the 1:20,000 scale boat sheet covering this area.

Dangers, channels and anchorages were described in the 1943 report of this area. Additional piers, wharves and the causeway from Moss Island to the main island at Latitude 52° 50.6' can be obtained from the air photographs covering this area.

STATISTICS:

Number of positions - - - - - - - - - - - - - - - - 602
Number of statute miles of sounding lines - - - - - 68.7

TIDAL NOTE:

A standard automatic tide gage was in operation on Navy Pier No. 1 on Attu Island, Massacre Bay, during the entire field survey of 1944. Data was obtained and compiled by the Ship EXPLORER from this gage. Mean Lower Low Water as determined by the Washington Office was 3.94 feet.

Respectfully submitted,

Henry O. Fortin

Henry O. Fortin, Lt. Comdr.

John E. Schultz

John E. Schultz, Lt. (j.g.)

Approved and forwarded:

Roland D. Horne

Roland D. Horne, Lieut. Comdr.,
Commanding Officer,
Ship EXPLORER.

Statistics

H-6940 - Additional Work

Massacre Bay, Attu I.

Date 1944	Day	Vessel	Miles of Sdg.Line	No. of Positions	Vol. No.
6/28	a	Launch 2	17.3	131	1
6/30	b	"	4.5	49	1
6/30	b	"	15.9	111	2
7/1	c	Launch 1	6.0	46	2
7/1	c	"	13.1	110	3
7/22	d	Launch 2		5	3
9/1	e	"	8.2	100	3
9/1	e	"	2.2	39	4
	5		67.2	591	4

Seattle Processing Office Notes

- H-6940 -
Additional Work

New Signals:

DER	Vol. 1, page 47
EULB	Vol. 1, page 47

Soundings reduced and checked by the Seattle Processing Office.

Records forwarded to Washington for plotting in accordance with the Director's letter dated November 8, 1944, 82/as.

Respectfully submitted,

Edgar E. Smith
Cart. Engineer

Approved and Forwarded:

F. H. Hardy
Officer in Charge,
Seattle Processing Office.

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. H 6941 Additional work 1944

Records accompanying survey:

Boat sheets .1..; sounding vols. 4...; wire drag vols. ....;

bomb vols. .....; graphic recorder rolls 1;

special reports, etc. .....

.....

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

Number of positions on sheet		571.
Number of positions checked		18.
Number of positions revised		5
Number of soundings recorded		3400
Number of soundings revised (refers to depth only)		50.
Number of soundings erroneously spaced		0.
Number of signals erroneously plotted or transferred		0.
Topographic details	Time	0.
Junctions	Time	2.4hr
Verification of soundings from graphic record	Time	6 hr

Verification by R.H. Carstens Total time 79 hr Date May 2 1945

Review by R.H. Carstens Time 21 hr Date May 5 1945

GEOGRAPHIC NAMES

Survey No.

H6940

Additional work 1944

Name on Survey

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
										1
										2
										3
										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

FORM M-238

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
PHOTOSTAT OF

No. H H6940
No. T Additional work 1944

received
registered
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired, If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
✓ 83	Reg 1, 2, 3		Comdr Finnegan Mailed 1/23/44 #12 check with copy of chart
88			
90			

RETURN TO

82	

PAC
6940

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

January 23, 1945.

~~Division of Hydrography and Topography~~:

✓ Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in
4 volumes of sounding records for Additional Work

HYDROGRAPHIC SHEET 6940

Locality Massacre Bay, Attu Island, Aleutian Islands, Alaska

Chief of Party: R. D. Horne in 1944
Plane of reference is mean lower low water reading
3.9 ft. on tide staff at of June 20, 1944 at Massacre Bay
6.5 ft. below B. M. 1

Height of mean high water above plane of reference is 3.3 feet.

Condition of records satisfactory except as noted below:

H. A. Marmer
Acting Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154327

NAUTICAL CHARTS BRANCH

SURVEY NO. H.6940 add'l. wk

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
8-26-55	9129	J. H Eaton	Comp. Applied to Recon 3ma ~~Before~~ After Verification and Review
4/7/59	9128	J. H Eaton	~~Before~~ After Verification and Review Reconstruction
9-21-92	16423	Ed Martin	~~Before~~ After Verification and Review New Chart
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

Corrections listed in report of addl work 6940 applied to chart 9128 (after special review of items) H.S.M. 2/10/45.

Partially applied to 9128 (after verification and review - including additional work) 5-21-45 H.S.M.

Applied to chart 9198 after review J.M.A. 6-19-45

6940

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

6940

Type of Survey Hydrographic

Field No. 102 Office No. H-6940

LOCALITY

State Alaska

General locality Aleutian Islands

Locality Massacre Bay, Attu Island

1943

CHIEF OF PARTY

W. M. Scaife HYDROGRAPHER C. C. Mattison EXPLORER

LIBRARY & ARCHIVES

DATE

8-1870-1 (1)

Form 537
Ed. Dec. 1930

REG. NO.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

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. 102

REGISTER NO. H-6940

State ~~Alaska~~ Aleutian Islands

General locality ~~Aleutian Islands~~ Attu Island

Locality Massacre Bay

Scale 1:10,000 Date of survey May to Nov., 1943

Vessel HYDROGRAPHER EXPLORER

Chief of Party W. M. Scaife G. C. Mattison

Surveyed by Ships' Officers

Protracted by R. M. Sylar

Soundings penciled by R. M. Sylar

Soundings in fathoms ~~feet~~ Fathoms

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by A. R. STIRNI

Verified by A. R. STIRNI

Instructions dated EXPLORER acting on Instructions from Liaison Officer ~~HYDROGRAPHER acting under Navy orders~~, 19

Remarks: Completion of field records and plotting by the Seattle Processing Office.

U. S. GOVERNMENT PRINTING OFFICE

H-6940

Preliminary Statement for Descriptive Report

It is unfortunate that there was no descriptive report rendered by Commander Scaife for hydrographic sheets H-6939 (1943) and H-6940, (1943) as these surveys were made under very interesting and difficult conditions.

Concerning the survey of Massacre Bay, the following facts were learned from conversation with officers on the EXPLORER and SURVEYOR, and from officers of the Merchant Marine who were on transports at the time of the landing on Attu:

(1) The HYDROGRAPHER, under command of Commander W. M. Scaife, was one of the first vessels to enter Massacre Bay prior to the landing of troops. The first recorded work was on May 12th, just one day after the American forces first landed on Attu Island.

(2) Numerous buoys marking channels and shoals were established by the party on the HYDROGRAPHER, and transports were piloted to anchorages in Massacre Bay by them.

(3) In addition to these duties, the HYDROGRAPHER was ordered by the Senior Naval Officer present to make many detached surveys for military purposes, and tracings of the day's work were usually prepared and submitted to the Sr. Naval Officer, sometimes between ten o'clock and midnight the day they were accomplished.

The party was handicapped by the lack of experienced survey officers and personnel. With the exception of Comdr. Scaife, and Lieuts. Laskowski, Wardwell, and Clark, all the other officers were inexperienced and lacked an engineering background.

It is not surprising that the records of the survey were not submitted in as complete a form as is customary with survey units. However, it is surprising that under the conditions existing these records could be interpreted and that the final result as shown on hydrographic sheets H-6939 and H-6940 gave such a complete hydrographic survey of the area.

The difficulties overcome in the processing of these sheets are brought out in detail in the attached report prepared by Mr. E. E. Smith.

(1) All of the numerous hydrographic signals used had to be plotted from sextant angles taken from triangulation and other stations. This necessitated considerable work. Those signals located on sheet H-6940, scale 1:10,000, were transferred to H-6939, scale 1:20,000, by D.M.'s and D.P.'s. There was in all cases a check on the location of each signal, namely, three cuts or more, or cuts and a three point location at the station. All these stations were located and carefully checked before any plotting of the hydrography was accomplished.

(2) The fathograms were quite mixed up. Soundings on several sheets were shown on one fathogram. The location of the fathogram pertaining to each day's work in many cases took considerable time. In a few cases, no fathogram could be found.

(3) In most cases, only soundings on the positions were recorded in the sounding volumes, and often there were as many as ten positions in sequence which were not marked on the fathogram. This made the scanning and checking of intermediate soundings, entered in the records by this office, very difficult.

In Mr. Smith's report, the sounding volumes are listed in order according to their consecutive Navy numbers. These volumes have been divided and re-numbered consecutively for each of the two hydrographic sheets. The file numbers are shown inscribed in circles on pages 20 to 24, (Index of Sounding Volumes), of the report.

The sheets show the completeness of the survey as executed by the field party. I feel that Mr. Sylar, who plotted sheet H-6940, and Mr. Fisher, who plotted sheet H-6939, deserve a great deal of credit for the care, speed, and interest shown by them in completing these sheets. Tracings of all the soundings shown on the smooth sheets were made and forwarded to the field, as additional field work is needed on both sheets.

No comment on the completion of these sheets would be complete without the mention of the interest and care exercised by Mr. Smith in arranging these records, and in his scanning of many fathograms and supervising similar work done by Miss Nechaj, Ensign Dorner, and Lieut. Jones.

It is hoped that the methods followed in handling the records will simplify the verification of these sheets.

F. H. Hardy

F. H. Hardy
Officer in Charge,
Seattle Processing Office.

LIST OF CONTENTS

H-6940

Aleutian Islands - Attu Island

Massacre Bay

Surveyed by parties of

HYDROGRAPHER	W. M. Scaife, Comdg.
EXPLORER	G. C. Mattison, Comdg.

1943

- - - - - - - - - - - - - - - - - -

This report was prepared in the Seattle Processing Office. There is no report by the field party, and because of the circumstances of the war, this office has had no contact with the officers of the HYDROGRAPHER.

In addition to the usual plotting, the Processing Office has scanned the fathograms, entered soundings except on positions, checked the scanning, entered reducers, and reduced the soundings.

Ships engaged-

This sheet is chiefly the work of the HYDROGRAPHER from May 18 to July 28, 1943. There is a fathogram of uncontrolled soundings on May 13 during the period when the ship was making hurried examinations of anchorages and escorting transports to them. This is not plottable. From Aug. 19 to Aug. 23, the EXPLORER developed a few small areas, the record filling about half a volume.

Project Number - Navy-

From the use of the number 305676 as a prefix to numbers on boat sheets, sounding records, and topographic sheet, we infer that this is the HYDROGRAPHER's project number for the Massacre Bay area.

Datum-

When the HYDROGRAPHER was ready to begin triangulation, no geographic position was available for a starting point. On inspection of available sheets, the following position was assumed for the position of station RIK: on H-6939

Latitude	52°	50'	41.022 N
Longitude	173	26	30.348 E

The triangulation was extended by Norman E. Sylar of the Army Engineers north from Massacre Bay to Chichagof Harbor. An approximate recovery was made of the observation pier, Chichagof Harbor, U.S.S. GANNET, 1934, the new station being called CHIC - U.S.E.D. 1943.

	Lat. N	Long. E
CHIC (Assumed datum 1943)	52° 56' 18.318	173° 14' 27.740
Ob. Pier (GANNET 1934 datum)	52 55 48.25	173 14 24.36
Correction from Sylar and Scaife 1943 to Navy 1934-	— 30.068	— 3.380

This neglects a difference in recovery of possibly a meter. The datum notation on the sheet is "U.S. Navy - Attu - 1934 Approximate."

Control-

The basic control is the 1943 triangulation starting from a measured base north of the head of Massacre Bay, corrected for datum as previously explained. Other signals are from Topographic Sheet 305676-105 T-6960 (1943) and supporting book of cuts, Vol. 17. filed with present survey

Topographic Sheet 305676-105- T-6960(1943)

This is on brown boat sheet paper.

The signals on this sheet are located by sextant angles which were recorded in a sounding record. Triangulation stations were used as bases and signals located from them were used as angle points. Many cuts were taken to rocks and tangents. It is not known how the shoreline was put on the sheet. Signals are so frequent that shoreline could be well sketched from inspection, supplemented by information from the many aerial photographs available, and the sextant cuts. Also, sextant fixes were taken at points along the shoreline.

Part of the topography was plotted also on scale 1:10,000 on boat sheet 305676-107 (H-6940).

All cuts to signals were replotted on the smooth hydrographic sheets, H-6939 and H-6940. The good intersections obtained show that the angles were carefully observed and accurately recorded. The smooth plotting was carefully checked. There are differences from the field plotting of sheet 305676-105, T-6960 but the smooth sheet plotting was held.

Signal Fun- No record was found for locating this signal other than the topographic sheet. It was transferred by distances from neighboring signals making some adjustment for differences between smooth sheet and topographic sheet in the positions of the signals so used.

Shoreline was transferred to smooth sheets H-6939 and H-6940 by adjusting from signal to signal along shore.

The book containing cuts is filed with the sounding records of H-6940 as Volume #17.

H-6940

TIDES

The Seattle Processing Office received sheets of hourly readings of Massacre Bay tides through the Washington Office. It was not stated whether these readings were from the Automatic Gage at the Navy wharf or the Portable Automatic Gage, but the reducer was entered on each sheet. The staff reading of MLLW on a temporary staff through June 19th was 3.8 feet; thereafter, the reading on the permanent staff was 3.7 feet. These corrections were applied to all hourly readings to obtain the reducers for soundings in Massacre Bay and the vicinity of Attu Island.

H-6940

TIDAL NOTE

Massacre Bay, Attu Island

Gage at: (approximate location)

Latitude	52°	50!95
Longitude	173	12.43

Gage at: (approximate location)

Latitude	52°	50!45
Longitude	173	11.65

Geodetic Datum - Navy 1954.

Note: It is not known which gage furnished the data for the high and low water sheets used for reductions to tides.

Fathograms - Ship HYDROGRAPHER:

In general, the party on the HYDROGRAPHER entered soundings in the volumes at positions only. In some books they maintained sounding entries at thirty second intervals.

The fathograms have been scanned in this office and the soundings entered for the usual intervals, all high points on the profile being entered at its proper time.

There are frequent long intervals on the fathograms with no positions indicated - 6, 8, or 10 positions skipped. These spaces were divided in proportion to time intervals between positions and scanned.

Index Correction-

In the report submitted by the party on the HYDROGRAPHER for the Korovin Bay sheet, Atka Island, H-6845, 1943, there are the following paragraphs:

"Ship soundings were obtained with a standard Navy NJ-3 or NMB-2 fathometer. The sounding records indicated which was being used. Both fathometers were calibrated for a velocity of 4800 feet per second. The NJ-3 fathometer is designed to give the depth below the oscillators. A constant correction of plus 2 fathoms was added to all NJ-3 soundings on the boat sheet. The NMB-2 fathometer was adjusted to give approximate true depths and no correction to NMB-2 soundings was applied on the boat sheet. Comparisons between wire soundings (vertical casts) and each fathometer are recorded in the sounding records.

Launch soundings were obtained with a standard Navy NK-1 fathometer which is similar to a Submarine Signal Co. 808 fathometer. The fathometers were set to give true depths by bar checks and lead line soundings on the bottom."

Since there are no reports from the HYDROGRAPHER concerning the sheets west of Atka, it is inferred that the statements concerning fathometers at Atka continued through the season. However, the type of sounding apparatus used is not always stated in the soundingsrecord, and it is presumed that the same instrument was used on the different days in a book. In processing the sheet, the continuity of fathograms from book to book has been used as evidence of the continued use of the same fathometer, and the boat sheet plotting at two fathoms deeper than recorded soundings has been used as corroborative evidence of the use of the NJ-3.

There is no description of the NMB-2 fathometer in any of the HYDROGRAPHER's records. Apparently it was rarely used for recorded soundings. It is believed that whenever it was used entries were made in the records.

Echo Correction-

The party on the HYDROGRAPHER did not submit any fathometer corrections to be applied to their soundings. The echo corrections obtained by the EXPLORER's party for use on a Hughes fathometer calibrated for an assumed sound speed of 800 fathoms per second, the same as the instruments on the HYDROGRAPHER, were applied to the HYDROGRAPHER's soundings. These echo corrections vary from zero at 100 fathoms to plus ten fathoms at 1,000 fathoms depth. Since the corrections are less than one percent of the depth below 1,000 fathoms, no echo corrections have been applied below that depth.

Massacre Bay - Attu Island

Tidal Note

Additional Work - 1944 - H-6939, H-6940, & H-6941

Massacre Bay

Standard Automatic Gage on Navy Pier No. 1

Latitude 52° 50'5

Longitude 173 11.7

Staff Reading of MLLW
as fixed by the Washington Office 3.94 feet

Reefs-

There are several large reefs obvious on the sheet. Due to the urgent need for haste under the circumstances of the survey, they were left undeveloped. Their dangerous character is unmistakable from kelp and rocks shown. They should be viewed in conjunction with sheet H-6939. (1943) Tracings of the unfinished areas were furnished to the ships returning to the field for further examination.

The less obvious shoals and rocks have been tabulated in detail in this report.

Rocks-

Notations at rocks appearing on boat sheets have been transferred to the smooth sheet when the character of the rock was not entered in the sounding book, nor shown on the topographic sheet.

Rock symbols- Rocks encircled by dotted (red) lines are taken from hydrographic notations and are deemed more certain than topographic locations from distant points. The recorded topographic cuts on rocks were not re-plotted, on H-6940, as it is expected that a general development of all detail on the large reefs will be made during 1944.

Rock south of signal Nix- near Lat. 52° 50.2 Long. 173° 16.8. Cuts were made to a rock or rocks from signals Mat and Ton and from a position on shoreline near signal Nix. A rock awash is shown in this vicinity on boat sheet 103. The rock was placed on the smooth sheet at the intersection of the cuts from Mat and Ton. It is noted that no remark was entered in the sounding record, 35-36-37p (red), (high tide) concerning this rock.

At the ten foot sounding between 36p and 37p directly abreast of signal Ton is a note "reef 20 M. to Stbd." This is believed to be the outer edge of the ledge to port. A cut from signal Lam to "outer tang. rocks beyond Mat" passes across the end of the ledge on port side of the boat. See cuts, Vol. 17, pages 28 & 32. The reef is not plotted on the boat sheet. reef plotted on port side only.

The foul area line around reef west of Alexai Point has been transferred from the boat sheet.

Principal Anchorage Basin-

This is approximately 3 miles long and 2 miles wide between the Army wharves and Alexai Point with general depths of 12 to 20 fathoms. While apparently it is exposed to southward, it is reported to be remarkably well protected by the reefs which break up the sea.

Approaching the Army wharves, the bottom shoals to approximately 6 1/2 fms. at berthing space. There is an islet 600 yards east of the wharves, and rocks extend 200 yards southeast of the islet. There is a half fathom sounding in a kelp patch 500 -600 yards east of the islet. There are small boat moorings north of the islet further protected by the islet and the reef.

There is good shelter from the eastward in the hook of Alexai Point in depths as desired from 10 to 5 fathoms.

The usual anchorage for large ships is north of Lat. 52° 50'.

Wharves-

The wharves were built during the progress of the sounding. Sounding lines ran across the sites before the wharves were built. On Army wharf #1 the partly completed structure stopped some lines.

Army wharf #1 was plotted from sextant fixes. It is shown with soundings on an insert, scale 1:2,000. There is no record for the location of Army wharf #2. It was transferred from the boat sheet.

The small boat and barge landing in Navy Cove is located by the sounding line which ran in on line with it and stopped 15 meters from it.

Of the Navy wharves in Pyramid Cove, the western one was built first and was outlined by sextant fixes. While the eastern wharf was under construction, the southwest corner was located, and an angle was observed along the west side. The eastern wharf is like the western reversed in plan (according to verbal information received).

Ramps and boat landings at head of Casco Bay - No record of these.

Channels-

Approaching from the Eastward, there is a buoyed channel running northwestward to Lat. 52° 49' Long. 173° 16' and passing 700 to 800 yards off the 15 foot rock (Al 1943) which is west of Alexai Point. The channel passes 400 yards northeast of the 1½~~2/6~~ fms. on Perida Pinnacle at Lat. 52° 49!07 Long. 173° 15!45.

Approaching from the Southwest, there is a buoyed channel following the west shore of Massacre Bay to (1) Casco Bay; (2) Navy wharves in Pyramid Cove; (3) the principal anchorage basin and the Army wharves.

A minimum depth of 10 3/4 fms. can be carried to the center of Pyramid Cove, thence shoaling to 6 fms. in berths at Navy wharves. There are buoys in the entrance to Pyramid Cove and on the shoal ground to east and west of the approach to the wharves.

Nine fathoms in the vicinity of Lat. 52° 50' Long. 173° 13' can be carried through the southwestern channel into the principal anchorage basin by hugging the west side of the channel, but the mid-channel course passes over 7 3/4 fms. This was cleared by the drag at 40 feet.

Small Boat Channel- There is a single line of soundings inside the islet between Navy Cove and Pyramid Cove. This is used as a small boat channel and should receive further attention. The shoalest smooth sheet sounding is 5 feet.

Casco Bay- Five fathoms can be carried into the entrance, thence the bottom shoals on an even gradient to the north end of the bay. At the south end of the bay there is a shoal with 2 ~~1/6~~ fms. at Lat. 52° 48!72 Long. 173° 10!32.

Buoys-

Buoys for which positions are given have been plotted. For some of them there are more than one position. Probably some were for temporary service only and apparently some buoys have been shifted. Most of them do not show on the preliminary sheet prepared by the Explorer in Nov. 1943.

You are referred also to boat sheets, numbers of which follow, for positions of buoys and their numbers:

102-2 (H-6940)
107 (H-6940)
103 (H-6939)
104 W.D(H-6939)

The locations of plotted buoys are shown on the following two pages.

Positions of Buoys

	Latitude	Longitude	
East Channel			
#11	52° 49:03	173° 15:95	
#12	49.11 07	16.16 03	Latest position Oct 11, 1943 (Explosion)
	~~49.00~~	~~15.87~~	
Red buoy #10	49.11	16.15	not plotted – buoy reset
Navy Cove			
	50.80	12.41	
	50.85	12.40	
Pyramid Cove			
Nun #4	50.33	12.03	
Can #3	50.00	11.79	
Can #5	50.27	11.60	
Nun #2	50.09	12.06	
Can #1	49.63	11.78	
Casco Bay			
Mooring	~~48.92~~ 48.75	10.53	
"	48.67	10.56	
"	48.72	10.46	
"	48.63	10.47	
Principal Anchorage Grounds			
Mooring	50.57	15.20	
"	50.86	14.60	
Small ~~reef~~ red buoy off sta. MASS	51.10	14.16	
Mooring – Army wharves	51.40	12.84	
" " "	51.43	12.91	
Mooring, E. of Army whvs.	51.48	~~13.20~~ 10	
" " " "	51.54	13.23	
" " " "	51.51	13.32	
~~" " " "~~	~~51.54~~	~~13.29~~	
" " " "	51.57	13.37	
" " " "	51.58	13.43	
" " " "	51.60	13.52	
" " " "	51.66	13.56	
" " " "	51.48	13.19	
" " " "	51.60	13.58	
West Channel			
~~Can #1~~	~~47.8~~	~~11.69~~	
Mooring (Net gate)	48.0	11.91	
" " "	48.03	11.72	
~~Can #3 (Survey buoy 8)~~	~~48.71~~ 48.71	~~11.33~~ 53	
~~Nun #2 (Survey buoy 9)~~	~~48.77~~	~~11.70~~	

West Channel (continued)

Can #3	52°	47.79	173°	11.65
Marker Buoy #4 (N-4)		47.84		11.98
Survey #1		47.77		11.65
" #2		48.67		11.60
" #3		48.71		11.31
Can #1		49.64		11.77
Can #5	From boat sheet - No position recorded	49.75		12.60
Nun #4	" " "	49.90		13.42
#7		50.39		13.56

Nets guarding the harbor entrances have been shown approximately along the line from Murder Point to Alexai Point. There are two nets also in the main anchorage grounds.

"a" Day, Launch #2 - May 20, 1943, Vol. 2-

The soundings in the latter part of this day are shoaler than adjacent soundings lines. An investigation of fathogram #601 shows a progressive reduction in paper speed first noticeable about position 75a. The paper feed dropped from 1.07 inches per minute to 0.905 I.P.M. The rate was tested for each 5 positions and the rate regularly reduced as shown in the accompanying table. This is assumed to be due to voltage drop in the batteries. Presuming that the stylus arm speed is proportional to paper feed, factors were obtained for the correction of soundings. When these were applied, very satisfactory agreement was produced where the discrepancy was greatest, near the end of the day, and a slight over-correction was caused with soundings too deep at the earlier positions.

As the sheet is well covered, this line can be omitted with no important detriment. It was decided to omit all soundings after pos. 87a except the more important ones. To those used, the correction factor was applied. They are indicated on pages 20 to 23, Vol. 16, with a red asterisk.

The factors as determined by Ens. E. A. Dorner follow:

Deduction of Factors
to apply to soundings on "a" day, 5/20/43
because of slowing down of fathometer.

Position	Scaled paper feed Inches	Minutes	Inches per Minute	Factor
60-65	13 29/32	13	1.07	1
65-70	13 29/32	13	1.07	1
70-75	16 17/32	15.5	1.067	1.005
75-80	14 3/64	13.5	1.041	1.028
80-85	15 17/32	15	1.035	1.033
85-90	10 17/32	10.5	1.002	1.068
90-95	14 7/32	15	0.948	1.130
95-100	13 29/32	15	0.928	1.152
100-103	7 22/32	8.5	0.905	1.182

The experience on "c" day is
also tabulated below for comparison.

1-5	6 14/32	6	1.072
5-10	11 7/32	10.5	1.069
10-15	11 7/32	10.5	1.069
15-20	12 26/32	12	1.058
35-40	10 20/32	10	1.063
45-50	13 12/32	12.5	1.069
50-55	12 9/32	11.5	1.069

Fathometer errors, "e", "f", and "g" days, Launch #1-

On June 11, 12, and 13, (Volume #3), the fathometer speed was erratic. The field party prepared corrections from bar checks and vertical casts. The correction curves have been replotted and the corrections entered in the sounding record on these days as fathometer "speed" corrections.

The preparation of the correction values is on coordinate paper in the back of this report.

"kk" day, Volume 14-

No fathogram is available for this day's work. The soundings were recorded at positions only. Two shoals were developed by running short lines across them, the positions at the ends of the lines falling in deeper water. The development adds little to the smooth sheet, due to the omission of soundings between positions.

The shoals were cleared with a drag set at 38 9 feet. Fathogram has been received- sdgs checked and recorded

The boat sheet shoalest soundings were transferred to Volume 14, pages 10 and 12, then plotted on the smooth sheet.

Note that it was the practice of the HYDROGRAPHER's party when making close development on shoals to show on boat sheet the shoalest soundings only. The shoalest soundings on the boat sheet, "kk" day, fall between positions and were not recorded.

	Shoalest Depths			Smooth
	Chart 9128	Boat Sheet	Sdg. Record	Sheet
Latitude 52° 49.5 N Longitude 173 16.5 E	7 fms.	7 fms.	7 1/4 fms.	7 1/4 fms.
Latitude 52 49.8 N Longitude 173 16.0 E	8 fms.	8 1/2 fms.	8 3/4 fms.	8 3/4 fms.

Bottom Samples-

Bottom samples were taken in Navy Cove and over a small area 200 meters north of station LOAF. The rest of the sheet is void of bottom samples.

Shoals near Alexai Point-

South of station AL, in the vicinity of Lat. 52° 48'8 Long. 173° 16'8 the overlapping soundings of H-6939 (1944) show shoals of ~~4/6 fathoms and~~ 3 4/6 fathoms which ~~were~~ was not shown on this sheet. The two sheets must be considered together in the overlap.

Least Depths-

In the following tabulation, least depths on shoals and rocks are noted, and attention is called to important soundings.

Latitude	Longitude	Position	Fathoms	Remarks
52° 51'48	173° 13'13	5a(g)	~~1 1/2~~ 3 1/2 P16	Original reading on kelp - disproved by Haddock 1944
51.53	13.37	7a(g)	2	
51.58	13.51	54-55u(b)	3	
51.42	13.90	137-138c(r)	~~1/2~~ 5/6	
51.32	13.93	~~45c(r)~~ 40-41 x(6)	~~1~~ 5/6	
51.16	14.06	46-47p(b)	3 1/2	
51.26	14.06	43-44c(r)	3	
51.02	14.37	68-69p(b)	6	
51.23	13.40	19s(b)	5	
50.79	12.45	10e(r)	1	
50.73	12.98	18-19m(r)	5 2/6	
50.56	13.31	103m(r)	4 5/6	
50.43	13.47	71-72m(r)	~~3 5/6~~ 3 4/6	

83

Latitude	Longitude	Position	Fathoms	Remarks
52° 50:05	173° 11:57	55k(r)	~~1/2~~ Rock	Sunken - hydro location
49.28	17.09	118-119f(r)	3 2/6	
49.48	16.53	56-57kk	7¼	
49.81	16.00	43-44kk	8 ~~1/2~~ 3/4	
49.07	15.45	143-144e(r) 140-141	1 ~~1/2~~ 5/4	Perida Pinnacle, sunken- Close to channel
49.61	15.18	56-57b(g)	10	
49.03	15.22	54-55e(r)	6	
49.29	14.82	69-70e(r)	8 1/2	
49.32	14.85	59-60e(r)	8 1/2	
49.22	13.88	160-161 ~~166~~gg(b)	3 5/6	~~S.E. rock of large foul area.~~
~~49.50~~	~~13.88~~	~~24-25e(r)~~	~~2 1/6~~	~~Eastern rk. of large foul area.~~
49.70	13.55	107 4'(r) ~~25d(r)~~	1 4/6	~~Northern rk. of " " "~~
49.60	13.22	30dd(b)	~~4/6~~ 2/6	N.W. rock of " " " Charted 2 ~~1/4~~.
49.14	12.93	60-61ee(b)	6 1/6	~~Western rock of " " "~~
48.93	13.04	65ee(b)	5 5/6	~~S.W. rock of " " "~~
48.86	13.30	105-106ee(b)	5 4/6	~~Southern rock of " " "~~
49.85	12.60	27-28bb(b)	~~5 5/6~~ 6/6	
49.90	12.76	85bb(b)	7 1/4	
50.11	12.62	31-32l(r)	3 2/6	Eastern projection of reef.
49.92	12.40	112-113x(b)	3 1/6	Southern " " "
50.10	12.12	41-42k(r)	3 1/2	Western " " "
49.52	11.63	75-76k(r)	5 5/6	
48.78	10.47	76-77ff(b)	2 ~~1/6~~	South part Casco Bay
48.72	10.32	137-138h(r)	1 1/6	
48.68	10.28	61f(r)	Rock	Awash - hydro location.
48.87	10.19	81h(r)	Rock	" " "

Latitude	Longitude	Position	Fathoms	Remarks
52° 48.55	173° 11.25	104v 111v(r)	Rock	Sunken - Located by sextant cuts.
48.56	11.14	127g(b)	5/6	
48.45	11.18	161-162hh(b)	2 5/6	South part of reef.
48.60	11.90	183-184cc(b)	5 2/6	
48.86	12.00	11-12aa(r)	5	
48.72	12.00	35-36dd(b)	2 2/6	Western part of foul area.
48.37	12.21	151-152ee(b)	3 2/6	Southern part of foul area.
48.08	13.46	80ee(b)	4 1/2	N. end of foul area.
47.85	12.87	122-123dd(b)	3 2/6	W. projection of foul area.
47.50	12.84	101-102dd(b)	2 1/2	1⅝ from 11-12aa(r) S. " " " "
47.70	13.18	118dd	Rock	Sunken
48.80	16.87	133-134f(r)	4 4/6	South end of foul area.
48.76	17.42	95f(r)	5 2/6	There is a 4/6 fm. sdg. 140 M. towards sta. AL on H-6939 Kelp-covered shoal.
47.86	11.22	56hh(b)	Rock	Sunken - hydro location.
47.90	11.25	51-52hh ~~49-50hh~~(b)	4 ~~2~~/6	¼ fm shoal (Not plotted)
47.90	11.50	27-28hh(b)	2 2/6	maybe kelp
47.87	11.53	35-36hh	3 4/6	
47.88	11.42	97-98cc(b) ~~59hh~~	1 5/6	may be kelp
47.83	11.30	107cc	1 2/6	possibly side echo
47.80	11.48	96-97cc	4 1/6	
47.72	11.36	102-103cc	4 2/6	4 fms from wire drag
48.01	13.54	115dd(b) 116ee-55ee(b)	Rock	Awahh - located by cuts ee dg blue. Other rocks on reef S.W. of this position similarly located. Hydro locations were preferred to locations shown on topographic sheet 305676-105 HYDROGRAPHER 1943. See sounding lines H-6939.

Latitude	Longitude	Position	Fathoms	Remarks
52° 47.25	173° 13.12	100dd, 98dd 116dd, 120dd	Rock	Sunken - Also topo cuts used to determine position of rk.
48.68	12.43	Rock in pencil on topo sheet - probably in error - not retained	Rock	Sunken - Topo location - Sdg. line 90-91dd(b) passed 10 meters off, but made no mention of rk. Graph didn't show it. Referred to field party for further examination- possibly in error.
48.26	13.34	79ee(b)	Two rocks?	Awash. It is believed that the notation should have been made at position 80ee instead of 79ee as the sdg. line continues over or very close to the spot, as plotted from pos. 79ee, and no shoal was indicated on the graph. The depths near the indicated positions of the rks. are 20 fms. There are rocks awash 120 meters S. x E from pos. 80ee. Referred to field party for verification.
48.83	17.34	identification in field uncertain - not retained on topo sheet - word breaker written on hydro sheet in general locality	Rock	Sunken - Transferred from topo sheet #105. No reference in sounding record. The kelp covered shoal 200 meters S.S.E. is noted in the records of both H-6939 and H-6940. Kelp patch not shown on Topo sheet. Rock shown in pencil on Topo sheet. It is believed that the rock is in the kelp patch.
47.89	12.95	rock not retained on topo sheet. Cuts were probably taken to other features	Rock?	Sunken - Pos. taken from Topo sheet 105, where it was located by 3 cuts from distant signals. The cut from signal Gray passes through the rocks. 650 meters south of sta. REEF. The cut from Sta. BAG passes near the rock 390 meters W.x S. of signal Far and the cut from sta. MIKE passes through the rocks, 470 meters north of signal Far. The sdg. line 115-116dd(b) passes within 10 meters of the rock with no indication of it on the graph & no reference in the book.

Positions 118,119, & 120 dd were used to locate rock in this area without mentioning the rock here concerned.

The position of the rock was transferred from Topo sheet to boat sheet and was charted on #9128.

It is believed to be in error, and has been referred to field pty. for verification.

Boat Sheets-

The boat sheets overlap in such ways that a clean division could not be made between them for registry and smooth plotting. It was decided to divide the area between the 1:10,000 sheet and the 1:20,000 sheet approximately on the line from Alexai Point to Murder Point. The tabulation below shows the various boat sheets and the registered sheets with which they are concerned. Where the boat sheet shows work of two or more registry numbers, it has been numbered for the one it chiefly concerns.

Massacre Bay Boat Sheet Field #	Boat sheet work plotted on Smooth sheets as shown below-			Registry Number assigned to boat sheet
	1:20,000 H-6939 sounding	1:10,000 H-6940 sounding	1:20,000 H-6941 wire drag	
101	x	x		H-6939
102-1		x		H-6940
102-2		x		H-6940
103	x	x		H-6939
104	x			H-6939
104-1	x		x	H-6939
104 W.D.	x		x	H-6941
107	x	x	x	H-6940

Index of Sounding Records

Attu Island Massacre Bay

Hydrographic sheets

H-6939 H-6940

Numbers-

The soundings volumes of work done in Massacre Bay were numbered by the party on the HYDROGRAPHER in the following way:

Boat	Sheet	#101	Volumes	401 to 406
"	"	106	"	407
"	"	102	"	408 to 422
"	"	103	"	423 to 428
"	"	104	"	429 to 430

Volume 407 is plotted on sheet H-6936. (1943) The other volumes are plotted on H-6939 (1942) and H-6940 (1942) as shown in this index.

There are also five volumes of the EXPLORER's soundings in Massacre Bay.

Where a book has been plotted on two registered sheets, the division is clearly shown. The book was numbered for filing with the records of the sheet with which it is chiefly concerned.

The number of the fathogram has been entered for each day's work of the HYDROGRAPHER, and cross entries were made on fathograms and sounding books. For certain days of the HYDROGRAPHER's work no fathograms were furnished. The forty-two rolls supplied have been thoroughly examined. Forty-one rolls are being returned to Washington. One roll, #635, was combined with #638. Fathogram #640 is uncontrolled and is not plottable.

The segregation of the fathograms for filing is shown on the last page of this index.

Copies of this index have been placed in each report, and in Volume 1 for each of sheets H-6939 and H-6940.

The file numbers assigned to the Massacre Bay volumes are shown in circles on the following index.

Index of Records
Massacre Bay

Vessel / Field / Sheet #	Vol. #	Plotted on H-6939 1:20,000 Date	Pos. #	Pages	Fath. #	Plotted on H-6940 1:10,000 Date	Pos. #	Pages	Fath. #
101	401	May 18	4-75A	3-20	641		75-81A	20-22	641
		18	84-87A	23-24	641		1-16B	25-28	641
HYDROGRAPHER		(1) 19	18-81B	29-42	641		81-84B	42	641
		20	4-127C	44-67	642		1 - 4C	43	642
		21	1-19D	69-72	642		127-129C	67	642
	402	May 21	20-93D	4-18	642 to Pos. 72. None 73-93	May 21	94-97D	18	None
		(2) 22	16-51E	24-29	None	22	1-15E	20-24	None
						22	51-75E	29-32	None
						24	1-104F	34-50	603
		24	104-136F	50-57	603		136-140F	57	603
		25	1-16G	59-62	603		22-25H	67-68	603
		June 7	1-22H	63-67	603				
	403	June 8	16-33J	3-7	603	June 9	Tide Gage & B.M.'s	7	
		(3) 10	1-21K	8-12	603				
		25	1-114L	13-35	603 to Pos. 42 ? 42-97 624 98-114				
		26	1-104M	36-56	624				
		28	1-34N	57-63	624				
		July 5	1-22P	66-71	624				
	404	July 8	1-134Q	4-30	624				
		9	1-67R	31-43	637				
		(4) 10	1-121S	44-66	637				
		11	1-31T	67-72	637				
	405	July 11	32-89T	4-16	637 to Pos. 75 None 75-89				
		15	1-132U	20-44	638				
		(5) 18	1-7V	45-46	638				
		19	1-2V'	47	638				
		24	1-7W	48-50	638				
		25	1-11X	21-54	638				
		26	1-3Y	55	638				
		29	1-62Z	56-71	638				
	406	July 31	1-15A'	4-7	638				
		Aug. 2	1-9B'	8-10	638				
		(6) 5	1-44C'	11-19	638				
H. Lch. #2	407*	July 25	1-39d	1-10					

*This work to be plotted on sheet H-6936, scale 1:100,000.

Note: The file numbers assigned to the volumes are shown in circles.

Vessel / Sheet / Field #	Vol.#	Plotted on H-6939, 1:20,000: Date	Pos.#	Pages	Path.#	Plotted on H-6940, 1:10,000 Date	Pos. #	Pages	Path.#
102 H. Lch.#1	408					June 15 (1)	1-79a	1-16	H.L. or Wire Sdgs.
102 H. Lch.#2	409					May 20	1-103a	6-23	601
						(2) 21	1-80b (Rej.)	24-37	602
						22	1-140c	38-61	602
						24	1-64d	62-72	602
	410					May 24	65-92d	3-7	602
						June 11	1-167e	9-36	606
						(3) 12	1-85f	37-51	607
						13	1-18g	54-57	607
						15	1-82h	58-71	607
	411					June 15	83-148h	3-14	607
						17	1-96j	15-30	608
						(4) 18	1-94k	32-47	608
						19	1-107 l	48-65	608
						20	1-41m	66-72	609
	412	June 21	1-160m	32-59	609	June 20	42-204m	4-31	609
		22	66-74p	71-72	634	(5) 22	1-65p	60-70	634
	413	June 22	75-154p	3-16	634	June 23	1-20q	17-22	634
		July 8	100-136r	24-30	612				
		(7) 9	1-169s	31-60	639				
		10	1-67t	61-72	629				
H.Lch.#1	414					June 24	1-224n	3-40	613
						(7) 25	1-187p	41-72	613
	415					June 25	188-190p	3	613
						(8) 26	1-150q	4-29	615
						28	1-115r	30-55	615
						July 1	1-97s	56-72	617
	416					July 1	98-115s	5-8	617
						July 2	1-109u	9-27	617
						(9) 3	1-184w	28-59	618
						4	1-76x	60-72	622
H.Lch.#2	417					July 1	1-78t	3-16	621
						(6) 2	1-153v	17-43	616
						6	1-27aa	44-48	621
H.Lch.#1	418					July 8	6-213cc	3-38	625
						(11) 9	1-140dd	39-62	625
						10	1-58ee	63-72	626

Vessel / Sheet / Field #	Vol.#	Plotted on H-6939 1:20,000 Date	Pos.#	Pages	Path.#	Plotted on H-6940 1:10,000 Date	Pos.#	Pages	Path.#
H.Lch.#1	419					July 4	77-117x	3-9	622
						(10) 5	1 -188y	11-42	622
						6	1-25z	43-47	622
						7	1-132bb	48-70	623
						8	1-5cc	72	625
	420					July 10	59-184ee	3-24	626
						(12) 11	1-113ff	25-44	626
						14	1-157gg	45-72	628
	421					July 14	158-164gg	3-4	628
						(13) 15	1-93hh	5-20	628
						28	1-86jj	22-36	633
H.Lch.#2	422					July 28 (14)	1-128kk	3-24	~~not found~~
103 H.Lch.#2	423					May 23	1-58b'	7-17	604
						(15) 24	1-98c'	18-34	604
						June 9	1-128d'	35-56	604
						10	1-95e'	57-72	605
	424					June 10	96-170e'	3-15	605
						(16) 24	1-168f'	16-45	610
		June 25	64-155g	57-72	611	25	1-63g'	46-56	619
	425	June 25	156g	3	611				
		(8) 26	1-151h	4-30	612				
		28	1-86j	31-45	614	June 28	87-118j'	46-51	614
		July 3	1-116k	53-72	619				
	426	July 3	117-119k	3	619				
		4	54-78 1	13-17	611	July 4	1-53 1	4-13	611
		(9) 5	1-16m	18-20	620	July 5	17-78m	21-38	620
							79-112m'	21-38	622
		7	1-84q	41-55	639				
		8	1-99r	56-72	612				
	427	July 10	68-136t	3-14	629				
		11	1-126u	15-36	630				
		(10) 14	1-152v	37-63	627				
		15	1-49w	64-72	629				
	428	July 15	50-62w	3-5	629				
		(11) 22	1-72x	6-18	630				

Vessel / Sheet / Field #	Vol. #	Plotted on H-6939 1:20,000 Date	Pos.#	Pages	Fath.#	Plotted on H-6940 1:10,000 Date	Pos.#	Pages	Fath.#
104 H.Lch.#1	429	July 22 (12)	1-69a	3-14	631				
	430	Aug. 4 (13)	1-31b	4-10	631				
EXPLORER Lch.#2	1	Aug. 25 (14)	1-72d	32-52		Aug. 19	1-20a	3-6	
		26	1-32e	55-64		21	1-59b	8-21	
						23	1-34c	23-30	
	2	Sept. 6 (15)	1-44f	3-19					
		(Cuts to channel buoys & net gates in this vol.)							
Lch.#1	3	Aug. 12 (16)	1-58a	3-24					
		13	1-134b	27-71					
	4	Aug. 17	1-15c	3-8					
		(17) 19	1-123d	10-49					
		21	1-50e	52-67					
	5	Sept. 6	1-64f	3-24					
		Nov. 1 (18)	1-40g	26-38					

Fathograms - HYDROGRAPHER-

The arrangement below shows how the 42 Fathograms received from the HYDROGRAPHER's records are assigned to sheets for filing in the archives.

Fathogram Roll #	H-6939	H-6940
601		x
602		x
603	x	
604		x
605		x
606		x
607		x
608		x
609		x
610		x
611	x	
612	x	
613		x
614	x	
615		x
616		x
617		x
618		x
619	x	
620		x

Fathogram Roll #	H-6939	H-6940	H-6936
621		x	
622		x	
623		x	
624	x		
625		x	
626		x	
627	x		
628		x	
629		x	
630	x		
631	x		
632			x
633		x	
634	x		
635	(added to Roll 638)		
636			x
637	x		
638			x
639	x		
640	x	(uncontrolled sdgs.)	
641	x		
642	x		

This tabulation is listed here because a number of the rolls contain soundings for two sheets. Fathogram numbers have been shown in the sounding records.

LIST OF SIGNALS

H-6940

Triangulation Stations - 1943

ACRE
AL
BAG
CREE
DOCK
DOME
FLAG
GAB
LEX
LITTLE
LOAF
LONE
MASS
MIKE
NOR (North Radio Mast)
NIP
PIN
RAD (S. Radio Mast)
REEF
TANK

Hydrographic Signals

Ann
Arm
Big
Blue
Boy
Box
Bye
Cal
Cas
Cove
Cross
Dog
End
Eva
Fall
Far
Fin
Fir
Fun
Gray
Gull
Gum
How
Hum
Hut
Item
Jan
Jap
Jee
Joy
Kin
Kit
Knob
Lad
Lam
Lat
Lee
Low
Lug
Mar
Mat
Min
Miss
Mix
Moke
Nik
Nix
North
Ope
Par
Pin
Pole
Pon
Rag
Rat
Red
Rod
Scar
Sharp
Sig
Sir
Son
South
Tar
Tip
Ton
Top
Ute
Vee
Wes
You

H-6940

Statistics

Number of Positions 5191

Statute Miles Sounding Line,
Partly estimated 810

Area - Square Statute Miles 18.2

Submitted by:

Edgar E. Smith

Edgar E. Smith
Assoc. Cartographic Engineer
Seattle Processing Office

Approved and Forwarded:

F. H. Hardy

F. H. Hardy
Officer in Charge,
Seattle Processing Office.

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. H6940

Records accompanying survey:

Boat sheets ....; sounding vols. ....; wire drag vols. ....;

bomb vols. .....; graphic recorder rolls .....;

special reports, etc. .....

.....

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

Number of positions on sheet		5191.
Number of positions checked		281.
Number of positions revised		13.
Number of soundings recorded		25000 (Estimate)
Number of soundings revised (refers to depth only)		31
Number of soundings erroneously spaced		24
Number of signals erroneously plotted or transferred		—
Topographic details	Time	48
Junctions	Time	8
Verification of soundings from graphic record	Time	32

Verification by A.R. STIRNI Total time 304. Date 9/28/44

Review by R.H. Carstens Time 73½ Date 10/21/44.

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

LQC
DMC

TIDE NOTE FOR HYDROGRAPHIC SHEET

June 20, 1944

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: H. B. EDMONSTON

Plane of reference approved in
17 volumes of sounding records for

HYDROGRAPHIC SHEET 6940

Locality Aleutian Islands: Attu Island, Alaska. Massacre Bay, Inner harbor.

Chief of Party: W. M. Scaife in 1943
Plane of reference is mean lower low water
3.7 ft. on tide staff at Massacre Bay
6.5 ft. below B. M. 1

Height of mean high water above plane of reference is 3.3 feet.

Condition of records satisfactory except as noted below:

E K Green
Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154327

GEOGRAPHIC NAMES

Survey No. H6990

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Aleutian Is.										1
Attu I.							U.S.G.B			2
Massacre Bay		525	730E	(Also location of tide staff)						3
Murder Pt.			"							4
Casco Cove			"							5
Pyramid Cove			"							6
Alexai Pt.			"				U.S.G.B			7
Navy Cove			"							8
										9
										10
			Names underlined in red approved by L. Heck on 11/11/44							11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

	Remarks	Decisions
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		

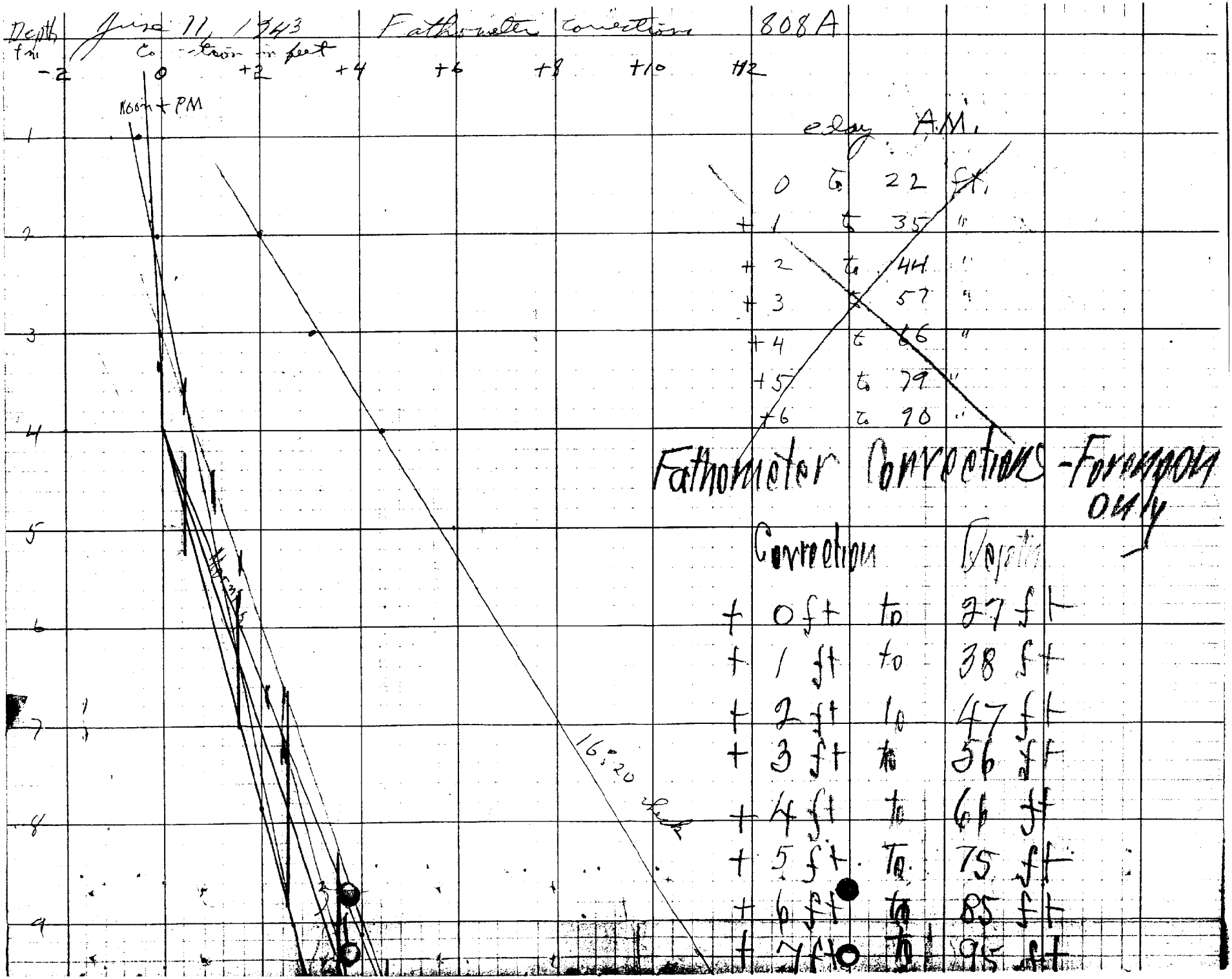
6940

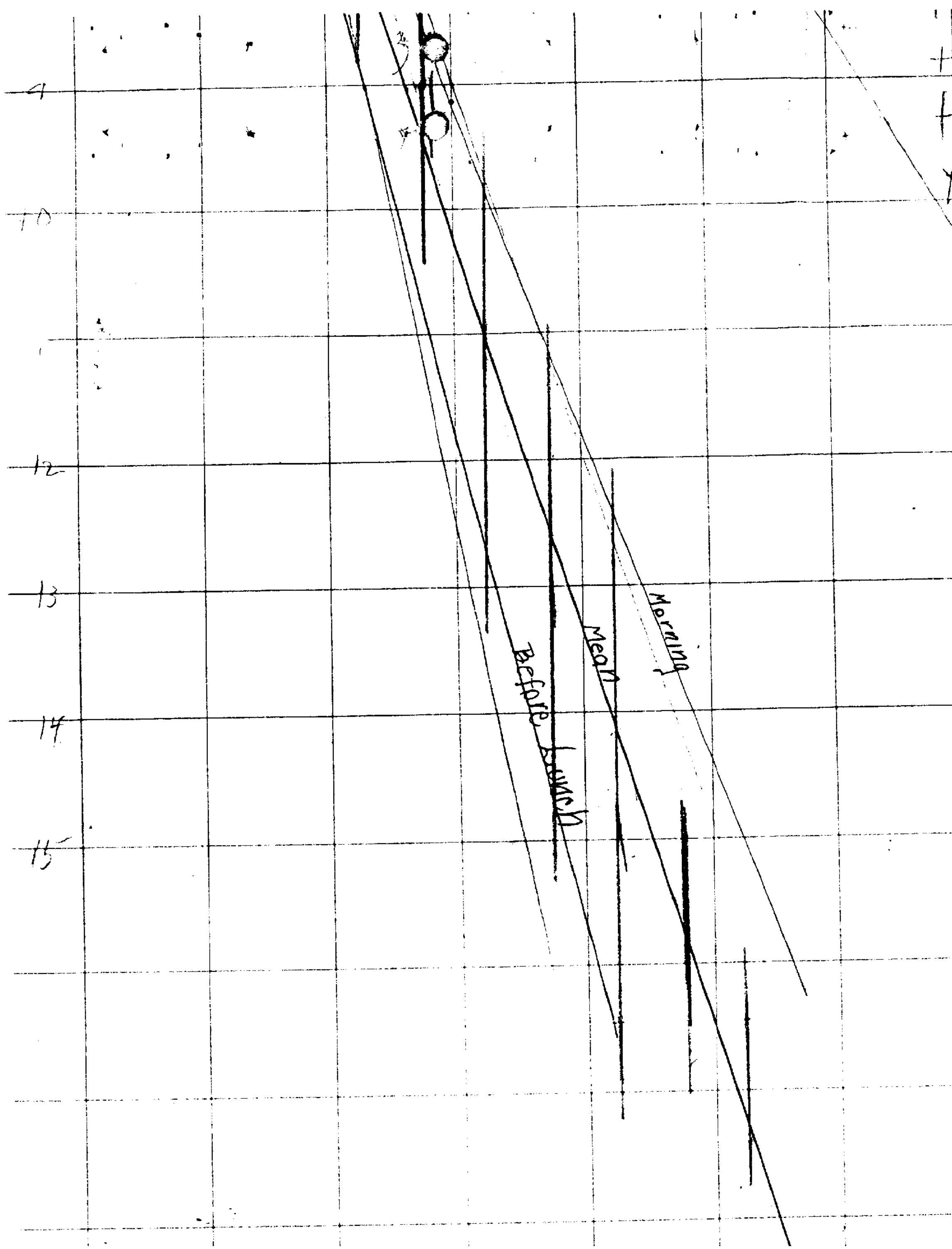
Fathometer Corrections
Launch #1

Forenoon of "e" day only - Pos 30e to 75e
June 11 1943

Vol 410 = #3

6940


Depth in fm
June 11, 1943
Fathometer corrections
808A
Correction in feet
-2
0
+2
+4
+6
+8
+10
+12
Noon + PM
16:20
day A.M.
0 to 22 ft.
+1 to 35 "
+2 to 44 "
+3 to 57 "
+4 to 66 "
+5 to 79 "
+6 to 90 "
Fathometer Corrections - Foreground only
Correction
Depth
+ 0 ft to 37 ft
+ 1 ft to 38 ft
+ 2 ft to 47 ft
+ 3 ft to 56 ft
+ 4 ft to 66 ft
+ 5 ft to 75 ft
+ 6 ft to 85 ft
+ 7 ft to 95 ft



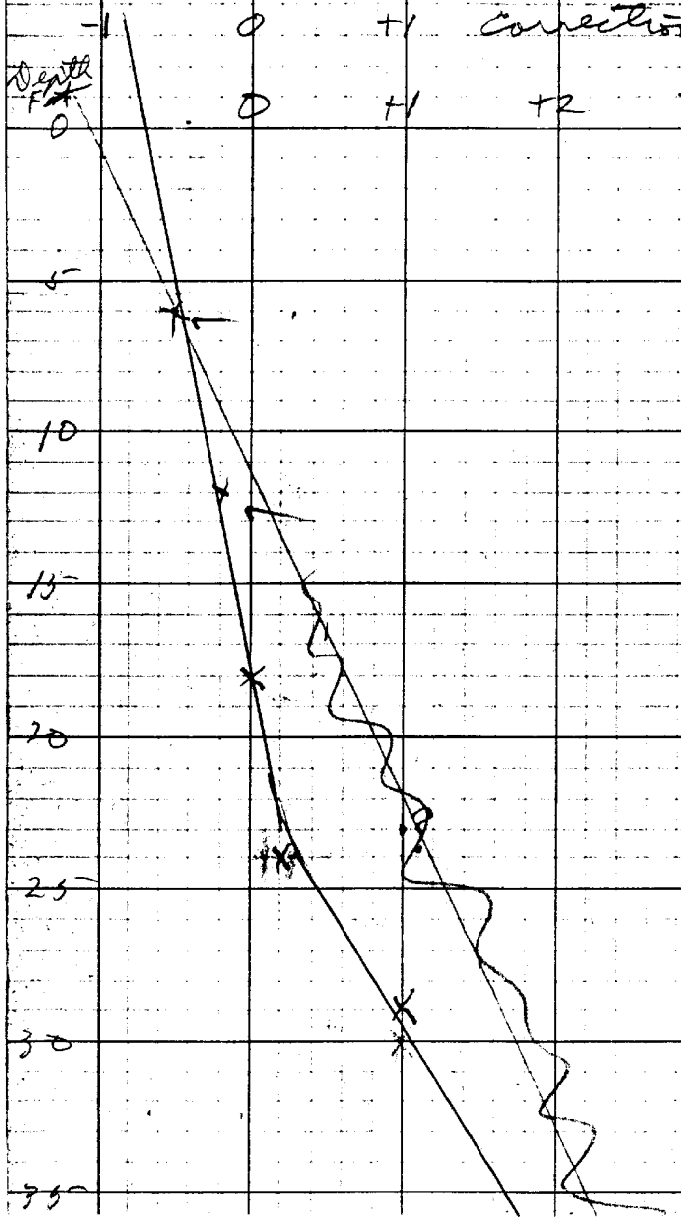
6 ft to 85 ft
7 ft to 95 ft
8 ft to 103 ft

Hydrographer's
Launch #1
Massacre Bay
"e" Day
6-11-43
Fath. Roll 606
Vol 410

H 6940

Massacre Bay
Fathometer Corrections
Launch 1
"f" day 6-12-43
Vol 410

Fathometer Corrections June 12, 1943

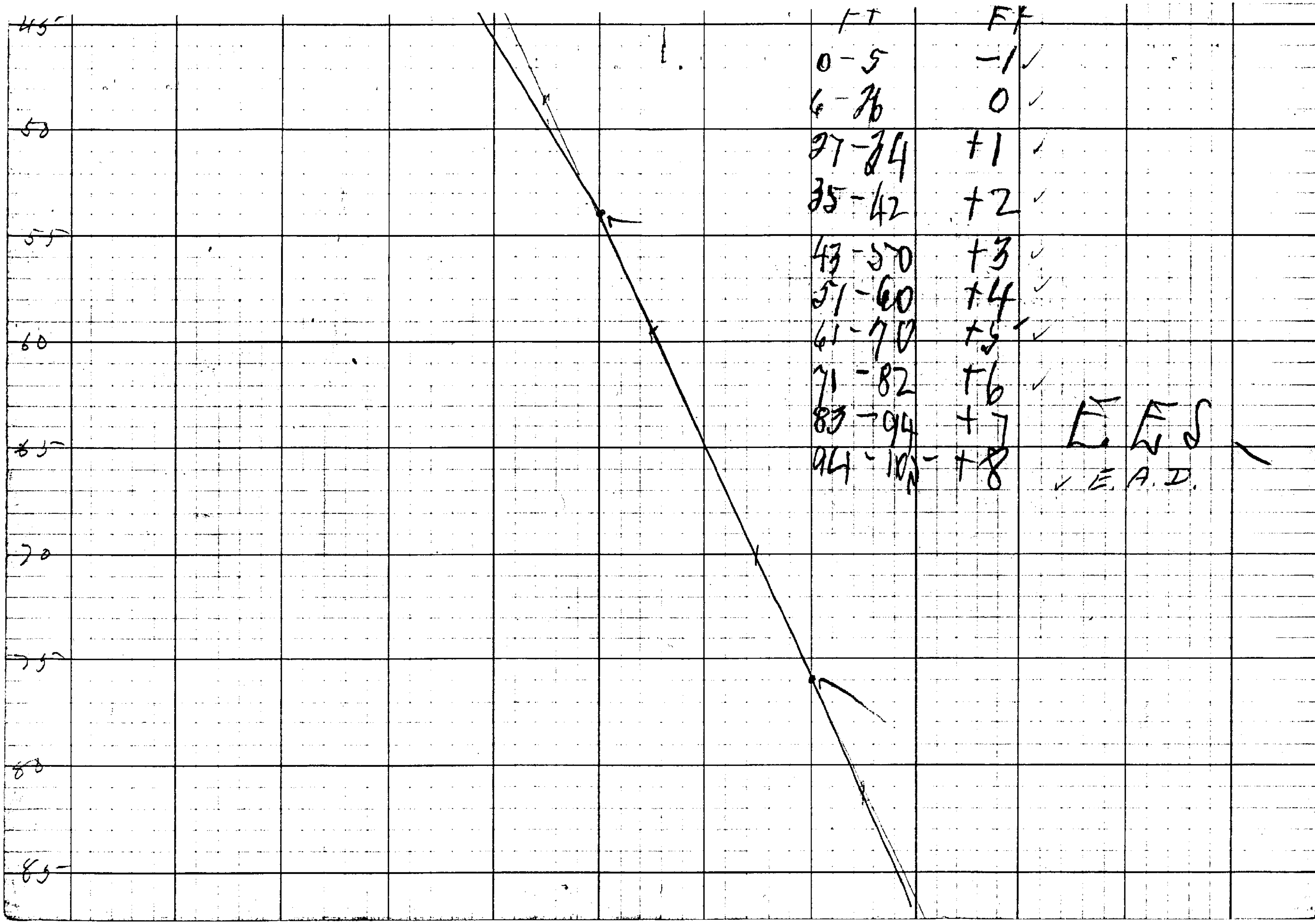


Fath

Ft.	Cor.
0 to 6	-1
7 to 16	0
17 to 27	+1
28 to 38	+2
39 to 48	+3
49 to 59	+4
60 to 70	+5
71 to 81	+6
82 to 92	+7
93 to 103	+8
104 to 114	+9

Tides

1.



FT	FF
0-5	-1
6-26	0
27-34	+1
35-42	+2
43-50	+3
51-60	+4
61-70	+5
71-82	+6
83-94	+7
94-10[illegible]	+8

E. E. S

E. A. D.

6940

Massaro B-
Father for Correctus
"9" day 6/13/43

6940

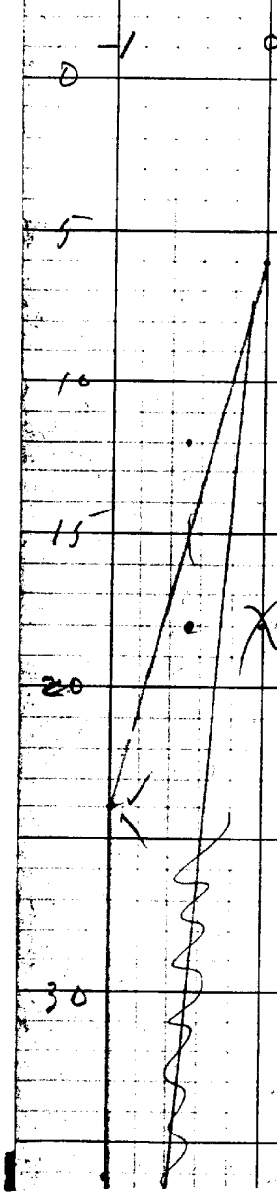
50

60

9 day - 6/13/43
Launch #1
Vol 410
Fath. Roll 607
Corrections to soundings.

[illegible]

Fath. Corrections J. day ~~Launch No 1~~ Sheet 102



Tide -3 for all soundings

fath corr. ~~0 to 30 ft.~~

~~-1 to 90 ft.~~

Ft.	Ft.
0 - 15	= 0
15 - 60	= -1

Laomon #1

Bar checks for June 11, 1943 – "e" day

FaTh. 808

(16-19-00)

end of day

	Correct	FaTh.
Bar check	6	5.5
" "	12	10.0
" "	18	15.0
" "	24	19.5
" "	30	24.2

Lead Line 56.0 FaTh. 45.2

(13-18-00)

after noon

" "	6	5.5
" "	12	12.1
" "	18	18.0
" "	24	24.0
" "	30	30.0

" " 44.0 " 43.0

(12-10-00)

before Lunch

" "	6	6.5
" "	12	12.2
" "	18	18.1
" "	24	24.0
" "	—	—

" " 47.0 " 45.0

(09-57-00)

In morning

" "	6	6.0
" "	12	12.0
" "	18	18.0
" "	24	24.0

" " 55.0 " 51.0

Work after noon repeated –

June 11, 1943

1015 — 5.0

1200 — 4.8

1400 — 4.5

1600 — 4.00

	corr.
0 to 22	−3
23 to 35	−2
36 to 44	−1
45 to 57	0
58 to 66	+1
67 to 79	+2
80 to 90	+3

FORM M-238

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT } No. H H6940
PHOTOSTAT OF } No. T

{ received
registered
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
✓ 25	Pg 9, 10		
26			
30			
40			
62			
63			
82			
✓ 83	Pg 15 & 16	L.B.B.	
88			
90			

RETURN TO

82	

DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY REGISTRY NO. 6940

Field No. 102

Aleutian Islands, Attu Island, Massacre Bay
Surveyed May - November 1943; Scale 1:10,000
Oral instructions of Liaison Officer

Soundings:

Hand lead
808 Fathometer
Navy NK-3, NJ-3
and NMB-2

Control:

Three-point fix on shore signals

Chief of Party - W. M. Scaife; G. C. Mattison
Surveyed by - Ship's Officers
Protracted by - R. M. Sylar
Soundings plotted by - R. M. Sylar
Verified and inked by - A. R. Stirni
Reviewed by - R. H. Carstens
Inspected by - H. R. Edmonston, November 4, 1944

1. Shoreline and Signals

The shoreline and signals originate with T-6960 (1943) and sextant cuts recorded in the sounding volumes. The topographic signals were located by sextant cuts and are shown in blue on the present survey. Additional information is given on page 3 of the descriptive report. The ledge line off the west tip of Alexai Point has been changed to conform with cuts from signals TON and PAR.

2. Sounding Line Crossings

Satisfactory.

3. Depth Curves and Submarine Relief

The usual depth curves could be satisfactorily drawn except in areas foul with kelp and shoals.

The bottom is extremely irregular. Rocky shoals and pinnacles rising sharply from deeper depths make navigation hazardous over much of the area.

4. Junctions with Contemporary Surveys

A satisfactory junction was effected with H-6939 (1943) on the south.

5. Comparison with Prior Surveys

There are no prior surveys of the area by this Bureau.

H-6941 (1943) W. D.

Effective depths of this wire drag survey are in harmony with the soundings of the present survey.

6. Comparison with Chart 9128 (latest print date 1-22-44)

a. Hydrography

The charted hydrography originates with advance information of the present survey shown on various blueprints. There are differences of as much as 1 fm. in depth and 100 meters in position between some of the smooth sheet values and preliminary values of soundings.

The following discrepancies between smooth sheet and charted information are noted:

(1) 5 fm. charted in Lat. 52°49.65', Long. 173°17.78' and 5 fm. in Lat. 52°49.75', Long. 173°17.70' from BP 37575 were probably plotted on the boat sheet in error. No such soundings were found in the sounding records.

(2) 1 fm. charted in Lat. 52°49.5', Long. 173°17.8' from BP 37850 may be an error in compiling that blueprint. The sounding was not found on any of the boat sheets.

Subitems 1 and 2 fall in an area covered by a large scale survey of 1944 shown on BP 38718 which disproves the depths in question.

(3) The 1-3/4 fm. charted in Lat. 52°49.3', Long. 173°16.55' and 5-1/4 fm. in Lat. 52°49.05', Long. 173°16.62' both from BP 37850 were not found on any of the boat

Item 6 A(6) of Review 1944

sheets. The 1-3/4 fm. falls in present depths of about 10 fathoms and is probably out of position. A bare shoal lies about 130 meters south from this sounding. The 5-1/4 fm. depth falls on the edge of an undeveloped foul area near present depths of over 8 fathoms. The dangers in this area are sufficiently indicated by the sunken rock and kelp symbol to dispense with this sounding.

(4) The 5-1/2 fm. charted in Lat. 52°49.0', Long. 173°15.0' from BP 37287 falls in present depths of about 15 fathoms. The sounding, possibly originating with unrecorded soundings of the Ship HYDROGRAPHER probably is out of position and should fall on the shoal 200 meters to the northeast.
Above disposition confirmed by Adl Wk. 1944, Item #7, delete from chart. H.W.M. 1/29/45 Item 6A(3) of Review 1944

(5) 3-3/4 fm. charted in Lat. 52°49.05', Long. 173°15.2' from BP 37850 falls on a present survey 6 fm. shoal. No recorded data of the present survey could be found pertaining to the sounding. There is the possibility that the depth is from unrecorded information and the sounding should be retained on the chart until disproved by additional investigation.
3¾ disproved by Ad. wk. 1946 on H-6939
Retain 3¾ fms, not sufficiently disproved by Adl Wk. 1944, Item #7. H.W.M. 1/29/45 Item 6A(4) of Review 1944

(6) The two sunken rock symbols charted in Lat. 52°49.45', Long. 173°17.75' are shown as soundings on the present survey.

(7) 1-1/4 fm. charted in Lat. 52°50.5', Long. 173°16.38' from BP 37575 was plotted in error on the boat sheet and should be disregarded.

(8) 5-1/4 fm. charted in Lat. 52°48.8', Long. 173°13.3' from BP 37576 was plotted in error on the boat sheet and actually falls on the shoal to the northward.

(9) 3-1/4 fm. charted in Lat. 52°48.65', Long. 173°11.1' from BP 37576 is plotted in error on the boat sheet and actually falls on the shoal to the southward.

(10) 6-1/2 fm. charted in Lat. 52°49.12', Long. 173°11.2' from BP 37576 was probably compiled from the boat sheet in error. A 59-ft. depth appears on the boat sheet at that spot.

(11) 10 fm. charted in Lat. 52°48.9', Long. 173°11.3' from BP 37363 is probably an error in compiling the blueprint. The boat sheets and later blueprints do not show this 10-fm. depth.

(12) 11 fm. charted in Lat. 52°49.52', Long. 173°14.5' was probably compiled from BP 37470 in error and should have been 17 fathoms.

(13) The rock awash charted in Lat. 52°50.65', Long. 173°12.88' from T-6960 was not found at low water by the hydrographic party while other rocks awash 60 meters distant were located. A change of 10° in a sextant cut used in locating the rock on the topographic sheet would shift the rock to agree with the hydrographic position. The topographic location of the rock has not been carried forward.

(14) The rock awash charted in Lat. 52°50.75', Long. 173°12.4' originates with a boat sheet sounding of 0 fm. which has subsequently been changed to 1/2 fm.

(15) 5 fm. charted in Lat. 52°50.48', Long. 173°13.3' from BP 37470 was compiled from a boat sheet on which the soundings were in error. The corrected boat sheet does not show this sounding.

(16) 4-3/4 fm. charted in Lat. 52°49.78', Long. 173°13.55' from BP 37576 is plotted in error on the boat sheet and should be disregarded.

(17) The fill charted in the vicinity of Lat. 52°51.8', Long. 173°14.0' from BP 37850 is from information not recorded on the present survey but should be retained from the blueprint.

(18) The sunken rocks charted in Lat. 52°48.83', Long. 173°17.34' and Lat. 52°47.89', Long. 173°12.95' are discussed on page 18 of the Descriptive Report. These rocks have not been retained on the present survey.

(19) The 2-3/4 fm. charted in Lat. 52°51.22', Long. 173°13.6' and the 3-1/4 fm. charted in Lat. 52°50.15', Long. 173°12.72' both from BP 37576 have been changed in value and position on the smooth sheet and should be disregarded.

(20) The 1/2 fathom charted in Lat. 52°47.85', Long. 173°11.31' from BP 37850 falls on 1-2/6 fm. of the present survey. The sounding may originate with unrecorded information and should be retained until disproved by additional work.

1/2 may be side echo

Item 6A(5) Review of Add'l WK 1944

Except as previously noted the entire area should be recompiled from the present survey.

b. Aids to Navigation

In West Channel the numbering of buoys C-7, N-4 and C-5 has been changed to C-9, N-8 and C-7 since the survey was accomplished. The survey buoys Nos. 2 and 3 in the vicinity of Lat. 52°48.75', Long. 173°11.5' have been replaced by channel buoys C-5 and N-6. A number of mooring buoys in the eastern part of Massacre Bay have been established subsequent to the present survey. No information is recorded pertaining to the mooring buoy charted in Lat. 52°50.9', Long. 173°12.9'. A number of small-boat mooring buoys in the vicinity of the Army Docks at the head of Massacre Bay have not been charted. The beacons along the northeastern short of Massacre Bay, charted from BP 37850, have evidently been established subsequent to the present survey. The buoy located in Lat. 52°49.03', Long. 173°15.45' on the present survey has subsequently been removed. Other buoys are in satisfactory agreement with their charted positions.

7. Condition of Survey

Satisfactory. The survey was carefully plotted by the processing office. The arrangement of the data and addition of numerous notes simplified the verification and review considerably.

8. Compliance with Instructions for the Project

Satisfactory, except that few bottom characteristics were taken in anchorage sites and on shoals.

9. Additional Field Work Recommended

Should the opportunity present itself it would be desirable to have additional soundings in the vicinity of the reefs at triangulation station AL in Lat. 52°49.1', Long. 173°16.7' and triangulation station LONE in Lat. 52°48.6', Long. 173°12.4'. Accomplished in Add. Wk 1946

Additional lines are needed to develop the small-boat channel in the vicinity of Lat. 52°50.6', Long. 173°12.4'. Not done on Add Wk. 1946 Omit, channel closed

Additional investigation is needed to verify or disprove the 3-3/4 fathoms charted in Lat. 52°49.03', Long. 173°15.2'. Retain, see note par. 6a(5) 3¾ disproved by Add. Wk. 1946 on H-6939

10. Superseded Surveys

None.

Examined and approved:

Robert W. King
Chief, Surveys Branch

J. S. Borden
Chief, Division of Charts

Earl O. Heston
Chief, Section of Hydrography

G. R. Putnam
Chief, Division of Coastal Surveys

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6940 Add. Wk. 1944

FIELD NO. 6940a

Aleutian Is; Attu Is; Massacre Bay
Surveyed in June - September 1944 Scale 1:10,000
Instructions dated March 25, 1944

Soundings:

Hand lead
808 Fathometer

Control:

Three-point fix on shore signals

Chief of Party - R. D. Horne
Surveyed by - H. O. Fortin and J. E. Schultz
Protracted by - B. Candage
Soundings plotted by - B. Candage
Verified and inked by - R. H. Carstens
Reviewed by - R. H. Carstens, May 5, 1945
Inspected by - H. W. Murray

1. Signals and Shoreline

Two signals located by sextant fixes recorded in the sounding records were added to those of the original survey of 1943. No shoreline was added.

2. Sounding Line Crossings

Satisfactory.

3. Depth Curves

Satisfactory.

4. Junctions with Contemporary Surveys

The additional work satisfactorily joins H-6939 (1943) on the south. In lat. 52° 48.65', long. 173° 17.7' shoal soundings of 2-fms. and 2-2/6-fms. fall in present depths of about 4-1/2-fms. No fathograms are available for checking these shoal readings. The present additional work is insufficient to disprove the soundings and they have therefore been retained.

5. Comparison with Prior Surveys

A. H-6940 (1943) 1:10,000

The following differences affecting charted information were found with the 1943 survey:

(1) The 2-1/2-fms. charted in lat. 52° 47.9', long. 173° 11.5' is considered disproved by the present survey and should be deleted from the chart. The sounding, falling in present depths of about 5-fm. was probably a kelp reading.

(2) The 2-3/4-fms. charted in lat. 52° 48.5', long. 173° 12.3' should be superseded by the present sunken rock symbol.

(3) The 3-fms. charted in lat. 52° 48.37', long. 173° 12.24' should be superseded by the present depth of 1-1/6-fms.

(4) The 1-1/2-fms. charted in lat. 52° 51.49', long. 173° 13.15' is considered disproved by the hydrography covering the area and should be deleted from the chart. The 1-1/2-fms. is probably a kelp reading.

(5) The sunken rock, breaker symbol, charted in lat. 52° 48.82', long. 173° 17.35' is considered disproved by the hydrography and should be deleted from the chart. The original identification of this breaker was uncertain.

(6) The 1/2-fms. charted in lat. 52° 49.6', long. 173° 13.25' from the 1943 smooth sheet before verification and review, is a kelp reading and should be superseded by the present smooth sheet depth of 1-2/6-fms.

(7) The sunken rock charted in lat. 52° 48.04', long. 173° 13.5' should be superseded by the present rock awash.

(8) The sunken rock charted in lat. 52° 48.81', long. 173° 17.58' is a rock awash and should be charted in the present survey position.

(9) The wreck in lat. 52° 51.37', long. 173° 13.68' has not been charted.

B. H-6941 (1943-44) WD 1:20,000

Present survey depths are in harmony with the effective depths of this wire drag survey.

6. Comparison with Chart 9128 (Latest print date 1/16/45)

A. Hydrography

The hydrography charted within the limits of the additional work originates with both preliminary and smooth sheet values of sound-

ings from H-6940 (1943) and with critical depths of the additional work after a preliminary verification. Changes in the survey affecting charted information have been previously considered in Par. 5 above.

The following items falling within the area of the additional work are noted:

(1) The rock awash charted in lat. 52° 48.85', long. 173° 17.67' from T-6960 (1943) is plotted in error on that survey and should be charted about 150 m. to the southwest.

(2) The sunken rock charted in lat. 52° 47.88', long. 173° 12.9' from a pencilled position on T-6960 (1943) is considered disproved by the present development and should be deleted from the chart.

(3) The 5-1/2-fms. charted in lat. 52° 49.07', long. 173° 15.05' from bp. 37287 falling in present depths of about 15 fms. is considered disproved by the present development and should be deleted from the chart. (Prior consideration of the sounding was made in item 6a (4) of the review of the 1943 surveys).

(4) The 3-3/4-fms. charted in lat. 52° 49.03', long. 173° 15.2' from bp. 37850 falls in present depths of 5-2/6-fms. The sounding is not considered sufficiently disproved to be deleted from the chart. (Prior consideration of the depth was made in item 6a (5) of the review of the 1943 work). 3 3/4 disproved by Ad. Wk. 1946 on H-6939

(5) The 1/2-fm. charted in lat. 52° 47.83', long. 173° 11.32' from bp. 37850 was not investigated with the hand lead and should be retained on the chart until a more adequate disproval is accomplished. (Prior consideration of the sounding was given in item 6a (20) of the review of the 1943 work).

(6) The 1-3/4-fms. charted in lat. 52° 49.3', long. 173° 16.55' and the 5-1/4-fms. charted in lat. 52° 49.02', long. 173° 16.6' from bp. 37850 were probably plotted out of position on the blueprint and should be deleted from the chart. (Prior consideration of these soundings was given in item 6a (3) of the review of the 1943 survey).

(7) The 1/2-fm. charted in lat. 52° 48.87', long. 173° 16.8' from bp. 37575 is considered in item 6a (16) of the review of H-6939 (1943).

B. Aids to Navigation

A number of mooring buoys mainly in the vicinity of Navy Cove and along the east side of Massacre Bay were located on the present survey. No navigational buoys were located.

7. Condition of Survey

Satisfactory.

8. Compliance with Instructions for the Project

Satisfactory except that a number of kelp covered pinnacles were not investigated with the hand lead.

9. Additional Field Work Recommended

a. When convenient, consideration should be given to confirmation or disproval of the 3-3/4-fm. charted in lat. 52° 49.05', long. 173° 15.2'. This sounding originates with bp. 37850 and may possibly be based on unrecorded information. 3 3/4 disproved by Add'l. 1946 on H-6939

b. Bottom characteristic coverage of Massacre Bay is inadequate. Coverage made adequate by Add'l. 1946 on H-6939

c. The drag work on H-6941 (1943-44) is confined to channel lanes. Extension of drag work to cover most of the navigable waters would give greater assurance that all principle changes have been located.

Examined and approved:

Robert M. Kinsey
Chief, Nautical Chart Branch

F. A. Gordon
Chief, Chart Division

Earl O. Hanson
Chief, Section of Hydrography

Raymond R. Lyman
Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. H.6940

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
8-25-55	9129	J.N Eaton	Comp. Applied to Recon. ~~Before~~ After Verification and Review DMA
4/7/59	9128	J.N Eaton	~~Before~~ After Verification and Review Reconstraction
9-21-92	16423	Ed Martin	~~Before~~ After Verification and Review New Chart
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

Corrections listed in review of 6940 applied to Cht 9128

W.E.M. 2/22/45

Notes in green ink read to make any required change on chart 9128

J.M.A. 5-21-45

Applied to chart 9198 after review J.M.A. 6-19-45-