6936

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. 16143 *Office No.* H-6936

LOCALITY

State Alaska - Aleutian Islands

General locality Near Islands

Locality Ingenstrem Rocks to Attu I.

1943

CHIEF OF PARTY

W.M.Scaife G.C.Mattison L.C.Wilder

HYDROGRAPHER EXPLORER SURVEYOR

LIBRARY & ARCHIVES

DATE April 11, 1945

8-1870-1 (1)++

6936

6936

Form 537
(Ed. Nov. 1941)

REG. NO. H6936

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.

REGISTER No. H-6936

Field No. 16143

State Alaska - Aleutian Islands

General locality Near Islands

Locality Ingenstrem Rocks to Attu I.

Scale 1 : 100,000 Date of survey July - Nov. 1943

Instructions dated Project CS-218

Vessel HYDROGRAPHER, EXPLORER, SURVEYOR and Escorts.

Chief of party W.M.Scaife; G.C.Mattison; L.C.Wilder.

Surveyed by Same

Soundings taken by fathometer, graphic recorder, ~~hand lead wire~~

Protracted by P. M. Fisher

Soundings penciled by P. M. Fisher

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

REMARKS: Processed at Seattle Office.

U. S. GOVERNMENT PRINTING OFFICE 428975

Memorandum Regarding Sheet H-6936

The work on H-6936 done by the party on the HYDROGRAPHER was executed during the military operations against the Japanese in the western Aleutian Islands. Its main purpose was to furnish information to the Naval forces operating in this area. Later, the parties on the EXPLORER and SURVEYOR ran split lines and filled in additional areas on this work. The nature of all the work was reconnaissance rather than a finished survey, and at the completion of nearly every day's work, was immediately made available to the Navy in the form of preliminary surveys.

The work as executed by the HYDROGRAPHER was plotted on the Hydrographic Office chart of this area on a scale of approximately 1:160,000. The supplemental work done by the parties on the EXPLORER and SURVEYOR merged into the reconnaissance work accomplished between Attu and Buldir Islands. This work was plotted on a scale of approximately 1:351,000. This accounts for the fact that in many cases, work on each of these sheets is recorded in the same volume rather than separate volumes for each sheet.

The signals used on this offshore work were almost entirely natural objects and were determined by hydrographic cuts. Some of the objects used were not very distinctive features. Carrying control along a coast for a distance of 25 miles of necessity would mean that some of the determinations of signals might be questionable. However, as stated in the report, after spending a great deal of time on this work, adequate determinations of the signals were obtained.

Commander Mattison, in command of the EXPLORER, recommended that all of the work between Attu, Agattu, and Buldir Islands be plotted on a sheet, scale 1:200,000. Upon making this recommendation to you, we were instructed to plot the work shown on Chart 9198 on a scale larger than 1:160,000, which is the approximate scale of this chart. An arbitrary division of this work was made, and the eastern limit of 174° 50' E was taken so that Ingenstrem Rocks could be determined on this larger scale sheet.

The officers engaged in executing this work, were, I am sure, very skeptical about being able to plot this survey on a scale as large as 1:100,000. As stated in the report, it was only after signal NOB had been determined by triangulation in 1944, that it was possible to reconcile cuts to signals west of Theodore Point on Attu Island with the accuracy necessary to plot the positions on the scale of this sheet.

For further statements by field parties, see the Descriptive Report for sheet H-6935.

The survey as finally plotted is, in my opinion, an excellent reconnaissance survey, and can be accepted as a final survey for most of this area. This result reflects credit on all connected with the field work and on the exceptional care and judgment used by Mr. Fisher, cartographer, in processing this sheet.

22/MEK
1995 SE 4

February 9, 1944

To: Officer in Charge,
U. S. Coast and Geodetic Survey
Processing Office,
1500 Westlake Avenue, North
Seattle 9, Washington.

From: The Director
U. S. Coast and Geodetic Survey

Subject: Priority areas for processing hydrographic and topographic survey sheets.

With reference to your letter of February 1, 1944, regarding priority areas for processing hydrographic and topographic survey sheets, you mentioned in paragraph four that you have constructed a smooth sheet, on a scale of 1:200,000, for the work between Attu Island and Buldir Island. It is assumed the field work was accomplished on a scale of 1:200,000, but, if feasible, it is suggested that a part of this work be processed on a smooth sheet of a larger scale.

For charting purposes it may be desirable to smooth plot the area west of longitude 174° 15' E., and north of latitude 52° 18' on a 1:100,000 or 120,000 scale projection so as to include the Semichi Islands, Agattu Island, and the southern part of Attu Island. If this is done the shoal area south of Massacre Bay and the inshore areas adjacent to the islands will be on a scale more suitable for the construction of additional intermediate scale charts in the future. At present the offshore area is to be charted on a scale of 1:160,000, but later it may be found desirable to have approach charts on a scale between this and the 1:20,000 harbor charts.

Upon completion of the smooth plotting on the 1:200,000 scale sheet, you are requested to submit a special report on the methods used on this sheet.

Signed
L. O. Colbert
Director

FIELD NOTES FOR DESCRIPTIVE REPORT

HYDROGRAPHIC SURVEY OF

ATTU - AGATTU - SEMICHI

Instructions: Project CS-218, dated April 16, 1943

Area: This hydrographic Survey was executed at the request of the U. S. Navy. The area consists of the waters south and west of Attu to the 1000 fathom curve, between Attu and Agattu and South of Semichi Islands and Agattu to the 100 fathom curve.

Equipment: All Hydrography was done with the Dorsey and Hughes fathometer with the exception of a few shoal areas which were surveyed with a portable 808 depth recorder.

Control: The basic control of this Survey was an arc of second order triangulation executed by the U.S.S. HYDROGRAPHER and the U.S. ENGINEERS. The control was extended by sextant cuts by the U.S.S. HYDROGRAPHER and the EXPLORER. The cuts by the U.S.S. HYDROGRAPHER were sent to the Hydrographic Office.

Development: No attempt was made to extend the Survey in shore. Only those shoal considered dangerous to navigation were developed. The work was in the nature of a reconnaissance survey. Additional work is required in areas too foul for ship hydrography.

Plotting: The Survey was executed on a scale of 1:160,000. It is recommended that this survey be combined with the Survey from the eastern limits of this sheet and extending to the east of Buldir Island and both Surveys plotted on a scale of 1:200,000. It is suggested that the Survey executed by the U.S.S. HYDROGRAPHER in this area be plotted on this sheet. It will be necessary to obtain the records of the U.S.S. HYDROGRAPHER from the Hydrographic Office unless this has already been done.

Respectfully submitted

G. C. Mattison
Commanding Officer
U.S.C. & G.S.S. EXPLORER

POST-OFFICE ADDRESS: Seattle Processing Office, 1500 Westlake Ave. N., Seattle 9, Wn.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

March 27, 1945

To: The Commanding Officer
U.S.C. & G.S.S. DERICKSON

From: Officer in Charge,
Seattle Processing Office

Subject: Ingenstrem Rocks.

It is requested that you inform me as to the estimated height of Ingenstrem Rocks, as this information is necessary in protracting sheet H-6936.

The Coast Pilot states that the highest of these rocks is 6 ft. at High Water. The only note in the sounding records of this sheet is on page 62, Vol. 20, between positions 57 and 58 E day, (when the SURVEYOR was approximately a mile away from the rocks), which states that the rock bares 2 ft. At that time there was 3 ft. of tide, which gives the rock a height of 5 ft. at MLLW.

It is thought that either you or Lt. Comdr. Malnate may know which height is correct.

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

An elevation of 6 (six) feet at High Water is correct..

L. C. Welch

LIST OF STATIONS ON H-6956

Name used in hydro. survey	Origin of stations
ABE	Cuts, Volume 8
AID	AID (U.S.N.), 1943
ANDREW	Ship station, Volume 23
ARM	ARM (U.S.N.), 1943
AT	AT (U.S.N.), 1943
BACK	BACK (U.S.N.), 1943
BAKER	Ship station, Volume 23
BLACK	Hydro, from H-6939
BLUFF	Cuts, Volume1
BOB	Cuts, Volume 2
BOK (also called LEG)	Cuts, Volumes 3 & 11
BUM	T-6970
CAN	Cuts, Volumes 8 & 9
CENT	CENT (U.S.N.), 1943
CLARK	Ship station, Volume 24
CLIFF	Cuts, Volumes 10 & 11
COLD (Attu I.)	COLD (U.S.N.), 1943
COLD (Nizki I.) (*)	Cuts, Vdume 22
COOP	COOP 1944
DENVER	Ship station, Volume 24
DOM	Cuts, Vdume 9
DOME	DOME (U.S.N.), 1943
DOT	DOT (U.S.N.), 1943
EAST	Cuts, Volume 12
EASY	Ship station, Volume 21
END	END (U.S.E.D.), 1943
ET	Cuts, Volume 1, 2, 8 also Vol. 5, p.53, H-7018
FIRST	Azimuth: PAR to FIRST 262° 25' Distance: " " 3286.1 m. This data furnished by EXPLORER from radial plot and checked by 3 triangulation cuts, letter 3 Sept.1944 to Prog. Office.
FLAG	FLAG (U.S.N.), 1943
FOURTEEN	EAST PEAK 1944
FOX	FOX (U.S.N.) 1943
GAT	GAT (U.S.N.) 1943
GELL	Cuts, Volumes 1 & 2 also Vol.5, p.52, H-7018
GUM	GUM 1944 (listed as 1943 on G.P.'s)
GUN	GUN (U.S.E.D.), 1943

(continued)

LIST OF STATIONS ON H-6936

(continued)

HEAD	Cuts, Volume 1
HILL	Hydro, from H-6939
HOUSE (*)	Cuts, Volume 22
HUMP	Cuts, Volumes 2, 3, 4
ID	GIBSON 1944
JACK	Cuts, Volumes 1 & 2
KI (*)	Cuts, Volume 20
KOL	Cuts, Volume 10
LEG (also called BOK)	Cuts, Volumes 3 & 11
LEMON (*)	Hydro, from H-6937
LEX	LEX (U.S.N.), 1943
LITTLE	LITTLE (U.S.N.), 1943
LOAF	LOAF (U.S.N.), 1943
LOW	Cuts, Volume 3
MIKE	MIKE (U.S.N.), 1943
MYA	U.S.E.D. coordinates (see below)
NAC	NAC (U.S.N.), 1943
NEV	NEV (U.S.N.), 1943
NINETEEN	MIDDLE PEAK 1944
NIP	NIP (U.S.N.) 1943
NOB	THEODORE ASTRO 1944
NOSE	Cuts, Volume 1
NUB	Cuts, Volume 9
OFF	Hydro, from H-6939
OT	Cuts, Volumes, 10,11,13
PAR	PAR (U.S.N.), 1943
PEAK 4	PEAK 4 (U.S.N.), 1943
PEAK 7	PEAK 7 (U.S.N.), 1943
PERRY (*)	Cuts, Volume 22
PIN	PIN (U.S.N.), 1943
POKE	WEST PEAK 1944
PUG	PEAK 1 (U.S.N.), 1943
QUACK	U.S.E.D. Coordinates (see below)
RAG	Cuts, Volumes 1 & 2
RAYE	RAYE 1944
RED	Cuts, Volumes 2 & 8
RIDGE	RIDGE (U.S.N.), 1943
RIK	RIK (U.S.N.), 1943

(continued)

LIST OF STATIONS ON H-6936

(continued)

SAB	Cuts, Volume 10
SEA	SEA (U.S.E.D.) 1943
SHARP	Cuts, Volume 20
SHEMYA	SHEMYA (U.S.E.D.) 1943
SPIKE (*)	Cuts, Volume 1
TAT	Cuts, Volume 10
TEM	TEM (U.S.N.), 1943
TEMNAC	TEMNAC 1944
TENT	Cuts, Volume 1
TIP	Cuts, Volume 1
TIT	Cuts, Volume 10
TOW	Cuts, Volume 10
TOWRR	Cuts, Volume 20
TRI	Cuts, Volume 10
WHITE (Attu I.)	Cuts, Volumes 1 & 2
WHITE (Agattu I.)	Cuts, Volume 10
WOW	WOW (U.S.N.), 1943
YEL	Cuts, Volumes 9 & 11

(*) These signals were located by triangulation or topography in 1944. The difference between the 1943 hydro pos. and the 1944 positions was too slight to be plottable at 1:100,000 scale.

Signals MYA and QUACK were plotted by U.S.E.D. plane coordinates, by comparing them with the plane coordinates for sta. SHEMYA (U.S.E.D.) 1943 and applying the differences in Northing and Easting to the Geographic Position for SHEMYA. The grid North was assumed to be True North.

	Northing	Easting
MYA (TOP, USED)	32,598	111,606
SHEMYA	31,806	110,858
Differences	+ 792 ft.	+ 748 ft.
	(241.4 m.)	(228.0 m.)

	Lat.	Long.
SHEMYA (Dm's & Dp's for 1:100,000 scale)	52° 40'	174° 00'
	855.0 m.	640.9 m.
Differences	+ 24.1 m.	+ 22.8 m.
MYA	879.1 m.	663.7 m.

	Northing	Easting
QUACK (WAT U.S.E.D.)	32,030	111,375
SHEMYA	31,806	110,858
Differences	- 224 ft.	- 517 ft.
	(68.3 m.)	(157.6 m.)

	Lat.	Long.
SHEMYA (Dm's and Dp's for 1:100,000 scale)	52° 40'	174° 00'
	855.0 m.	640.9 m.
Differences	+ 6.8	-15.8
QUACK	861.8 m.	656.7 m.

Aleutian Islands

Buldir Island to Attu & Agattu Is.

INDEX OF RECORDS

H-6935 & H-6936

Plotted on H-6935 (Field No. 35145)

Vol. #	Vessel	Date 1943	Pos. Nos.
1	EXPLORER	7/24	1-35 A
		7/25	1-150 B
		7/26	1-43 C
		7/29	1-79 D
2	EXPLORER	7/31	1-39 E
		8/2	1-43 F
		8/7	1-41 G
		7/9	1-96 H
3	EXPLORER	8/10	1-88 J
		8/11	1-60 K*
		*continued in Vol. 6, H-6936	
		11/2	1-33 AL
		11/4	1-34 M*
		*continued in Vol. 5, H-6935	
4	----------		
	EXPLORER	9/29	1-64 P
		9/30	1-92 Q
5	EXPLORER	11/4	35-37 M
		11/5	1024 AM
		11/9	1-25 AP
		11/24	1-19 QA
		11/26	1-45 R
6	EXP. Lch. #1	8/10	1-33a
7	ONONDAGA	7/24	1-20 A
		8/2	no numbers F
		8/7	1-27 G
8	ONONDAGA	7/25	1-53 A
		7/26	1-30 B
		7/28	1-56 C
		7/29	1-80 D
		8/10	1-44 K
		8/11	27-72 L*
		*L day begins in Vol. 10	

Plotted on H-6936 (Field No. 16145)

Vol. #	Vessel	Date 1943	Pos. Nos.
	EXPLORER	9/5	114-156 AM

Plotted on H-6935 (Field No. 35143)

Vol. #	Vessel	Date	Pos. Nos.
		1943	
9	ONONDAGA	7/30	1-41 E
		7/31	1-44 F
		8/1	1-86 G
		8/8	1-74 H
		8/9	1-97 J
10	ONONDAGA	8/11	1-27 L*
	*continued in Vol. 8		
11	KING	9/29	1-50 A
		9/30	1-65 B
12	ORACLE	11/4	1-25 M
		11/5	1-16 N
	CYANE	11/26	1-34 R
13	ORACLE	11/2	1-29 AL
	CYANE	11/9	1-20 AP
		11/24	1-15 AA
14	SURVEYOR	10/25	1-15 A
		10/27	1-33 B
		11/12	1-47 C
		11/13	1-55 D
		11/22	1-29 E
		11/23	1-76 F
15	GILMORE	10/25	1-18 A
		10/27	1-34 B
		11/23	1-76 F
	EXPLORER	8/11	61-92 K*
	*continued from Vol. 5, H-6935		

Plotted on H-6936 (Field No. 16143)

Vol. #	Vessel	Date	Pos. Nos.
20	SURVEYOR	10/27	33-40 B *
			1-8 D
		(copied in both volumes)	
1	HYDROGRAPHER	7/14	1-70 A
		7/18	1-91 B
		7/24	1-36 C
2	HYDROGRAPHER	7/24	36-61 C
		7/25	1-132 D
		7/31	1-56 E
3	HYDROGRAPHER	7/31	56-77 E
		8/2	1-130 F
		8/3	1-45 G
4	HYDROGRAPHER	8/3	45-116 G
5	H. Lch. #2	7/25	1-39 d
6	EXPLORER	9/3	1-106 AL
		9/4	1-49 AM

Plotted on H-6935 (Field No. 35143)

Vol. #	Vessel	Date	Pos. Nos.
	EXPLORER	11/22	13-34 W
	EXPLORER	11/22	36-45 W

Plotted on H-6936 (Field No. 16143)

Vol. #	Vessel	Date 1943	Pos. Nos.
7	EXPLORER	9/4	50-137 AM
		9/5	1-113 AM
8	EXPLORER	10/3	1-57 A
		10/4	1-83 B
		10/5	1-87 C
		10/6	1-39 D
9	EXPLORER	10/6	40-82 D
		10/10	1-116 G
		10/11	1-56 H
		10/12	1-71 J
10	EXPLORER	10/8	1-127 K
		10/9	1-90 F
11	EXPLORER	10/16	1-119 K
		10/18	1-34 L
		10/21	1-109 M
12	EXPLORER	10/25	1-80 N
		10/26	1-120 P
		10/27	1-7 Q
		11/2	1-29 R
13	EXPLORER	11/3	1-44 S
		11/9	1-36 T
		11/15	1-62 U
		11/21	1-102 V
		11/22	1-13 W
14	EXPLORER	11/22	46-66 W
		11/24	1-36 X
		11/25	1-32 Y
15	EXP Lch.#1	10/11	1-54 a
		10/17	1-66 b
16	KING	10/4	1-47 b
		10/5	1-46 c
		10/6	1-21 d
		10/11	1-13 h
		10/12	1-43 j
		10/16	1-73 k
17	KING	10/18	1-8 l
	ORACLE	10/21	1-51 m
		10/25	1-41 n
		10/26	1-58 p

Plotted on H-6935 (Field No. 35143)

Vol. #	Vessel	Date	Pos.Nos.
	CYANE	11/22	7-22 w

Plotted on H-6936 (Field No. 16143)

Vol. #	Vessel	Date	Pos.Nos.
		1943	
18	ORACLE	10/27	1-4 q
		11/2	1-12 r
		11/3	1-21 s
	CYANE	11/9	1-15 t
19	CYANE	11/15	1-33 u
		11/21	1-47 v
		11/22	1-6 w
			23-24 w
		11/24	1-19 x
		11/25	1-14 y
20	SURVEYOR	10/21	1-47 A
		10/24	1-34 B
		10/25	1-55 C
		10/27	1- 8 D
		11/1	1-77 E
		11/2	1-9 F
21	SURVEYOR	11/2	10-84 F
		11/9	1-16 K
		11/11	1-7 L
		11/12	1-19 M
		11/15	1-35 N
		11/17	1-24 P
		11/22	1-24 Q
		11/24	1-36 R
22	SURVEYOR	11/3	1-102 G
		11/4	1-35 H
		11/8	1-24 J
23	GILMORE (DE-18)	10/21	1-35 A
		10/24	1-27 B
		10/25	1-31 C
		10/27	1 D
	ENGSTROM (DE-50)	11/1	1-49 E
		11/2	1-55 F
24	ENGSTROM (DE-50)	11/3	1-58 G
		11/4	1-22 H
		11/8	1-13 J
		11/15	1-30 N
		11/17	1-9 P

STATISTICS

H-6936

Vessel	Vol.No.	Day Letter	Date	Wire Sdgs.	Positions	Stat. Miles	
			1943				
HYDROGRAPHER	1	A	7/14	1	70	71.0	
"	1	B	7/18		91	104.8	
"	1 & 2	C	7/24	2	61	59.8	
"	2	D	7/25		132	129.0	
"	2	E	7/31		55	60.0	
"	3	F	8/2	1	130	135.0	
"	3 & 4	G	8/3		116	116.0	
" Lch.2	5	d	7/25		39	10.3	
EXPLORER	6	AL	9/3		106	113.0	
"	6 & 7	AM	9/4		137	145.0	
"	7	AN	9/5		136	148.5	(ends in Vol.4 H-6935)
"	8	A	10/3		57	66.5	
"	8	B	10/4		83	142.6	
"	8	C	10/5		87	104.6	
"	8 & 9	D	10/6		52	82.8	
"	9	G	10/10		116	145.0	
"	9	H	10/11		56	53.0	
"	9	J	10/12		71	117.0	
"	10	E	10/8		127	144.0	
"	10	F	10/9		90	153.0	
"	11	K	10/16		118	143.0	
"	11	L	10/18		34	42.0	
"	11	M	10/21		109	123.0	
"	12	N	10/25		80	93.0	
"	12	P	10/26		120	124.3	
"	12	Q	10/27		7	7.5	
"	12	R	11/2		29	23.0	
"	13	S	11/3		44	51.2	
"	13	T	11/9		36	40.0	
"	13	U	11/15		62	76.0	
"	13	V	11/21		102	114.0	
"	13 & 14	W	11/22		22	44.6	
"	14	X	11/24		36	42.0	
"	14	Y	11/25		32	40.0	
" Lch. 1	15	a	10/11		54	20.0	
" "	15	b	10/17		66	30.9	
U.S.S. KING	16	b	10/4		26	56.0	
"	16	c	10/5		46	96.0	
"	16	d	10/6		17	34.0	
"	16	h	10/11		13	23.0	
"	16	j	10/12		29	58.0	
"	16	k	10/16		73	143.0	
"	17	l	10/18		7	12.0	

Vessel	Vol.No.	Day Letter	Date	Wire Sdgs.	Positions	Stat. Miles
			1943			
U.S.S. ORACLE	17	m	10/21		51	123.0
"	17	n	10/25		41	88.0
"	17	p	10/26		58	119.0
"	18	q	10/27		4	6.0
"	18	r	11/2		12	26.0
"	18	s	11/3		21	48.0
U.S.S. CYANE	18	t	11/9		15	33.0
"	19	u	11/15		33	73.0
"	19	v	11/21		45	106.0
"	19	w	11/22		18	41.0
"	19	x	11/24		19	42.0
"	19	y	11/25		14	32.0
SURVEYOR	20	A	10/21		47	83.4
"	20	B	10/24		34	55.8
"	20	C	10/25		55	79.4
"	20	D	10/27		8	11.5
"	20	E	11/1		77	109.2
"	20 & 21	F	11/2		84	103.5
"	21	K	11/9		16	14.5
"	21	L	11/11		7	4.9
"	21	M	11/12		18	20.7
"	21	N	11/15		35	15.9
"	21	P	11/17		24	14.4
"	21	Q	11/22		24	20.5
"	21	R	11/24		36	39.9
"	22	G	11/3		102	94.4
"	22	H	11/4		33	35.6
"	22	J	11/8		24	29.2
U.S.S. GILMORE	23	a	10/21			
"	23	b	10/24		24	52.6
"	23	c	10/25		31	53.0
"	23	d	10/27			
U.S.S. ENGSTROM	23	e	11/1		12	19.0
"	24	j	11/8		13	16.2
"	24	p	11/17		10	8.0
TOTALS	24				4021	5156.0

Area, Sq. Stat. Miles -------- 3025

H-6936

Near Islands - Aleutian Is.

TIDAL NOTE

Massacre Bay Automatic Gage

Navy Pier No. 1

Latitude 52° 50!45

Longitude 173 11.65

Staff reading of MLLW ---------- 3.3 feet

GEOGRAPHIC NAMES

Survey No. H6936

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 Islands			(for title)							1
Ingenstrem Rocks										2
Semichi Islands								(USCB)		3
Agattu Island								"		4
Otkriti Bay								"		5
Attu Island								"		6
Massacre Bay								"		7
Theodore Point								"		8
C. Wrangell										9
Near Islands			(for title)							10
										11
										12
Shemya Island			Names underlined in red approved by L. Hecker 9/18/45					"		13
Alcan Cove										14
Nizki I.								"		15
Alaid I								"		16
Krugloi Pt								"		17
Cape Sabak								"		18
Gillon Pt								"		19
Armeria Pt.								"		20
Sarana Bay										21
Chirikof Pt								"		22
Temnac Bay								"		23
Neridisrov Bay								"		24
Chuniksak Pt								"		25
Abraham Bay								"		26
Mikhail Pt.								"		27
Etienne Bay								"		

M 234

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. H-6936.

Records accompanying survey:

Boat sheets .4..; sounding vols. 24..; wire drag vols. ....;

bomb vols. .....; graphic recorder rolls .31..;

special reports, etc. .....

1 roll Dead Reckoning Overlays .....

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

Number of positions on sheet		4021
Number of positions checked		68
Number of positions revised		19
Number of soundings recorded		24000 (Estimated)
Number of soundings revised (refers to depth only)		41
Number of soundings erroneously spaced		70
Number of signals erroneously plotted or transferred		—
Topographic details	Time	—
Junctions	Time	24
Verification of soundings from graphic record	Time	36

Verification by A.P. Stirni ...Total time 291.. Date Aug. 28 1945

Review by J.A. McCormick ..... Time 55 hrs. Date 9/14/45.

Pae

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

April 24, 1945

~~Division of Hydrography and Topography.~~

✓ Division of Charts: Attention: H. W. MURRAY

Plane of reference approved in
24 volumes of sounding records for

HYDROGRAPHIC SHEET 6936

Locality Near Islands, Aleutian Islands, Alaska

Chief of Party: W. M. Scaife, G. C. Mattison and L. C. Wilder in 1943
Plane of reference is mean lower low water reading
3.3 ft. on tide staff at Massacre Bay
6.8 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. F. Green

Chief, Division of Tides and Currents.

U. S. GOVERNMENT PRINTING OFFICE 154327

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY REGISTRY NO. 6936

FIELD NO. 16143

Aleutian Islands; Near Islands; Ingenstrem Rocks to Attu I.
Surveyed in July - Nov. 1943 Scale 1:100,000
Project No. CS-218

Soundings:		Control:
808A	Fathometer	Three-point fixes on shore signals
Dorsey III	Fathometer	Bearings and angles
Hughes	Fathometer	Range-finder distances
312	Fathometer	Radar bearings and distances
NJ-3	Fathometer	
NMB-2	Fathometer	

Chief of Party - W. M. Scaife; G. C. Mattison; L. C. Wilder
Surveyed by - Same
Protracted by - P. M. Fisher
Soundings plotted by - Same
Verified and inked by - A. R. Stirni
Reviewed by - J. A. McCormick, Sept. 14, 1945
Inspected by - H. W. Murray

1. Shoreline and Signals

All shoreline on this survey is approximate. Shoreline of Shemya Island was reduced from a 1:4800 scale U.S.E.D. print (N-177-P-22) and fitted to the plotted positions of triangulation stations SEA, GUN, SHEMYA and END. Shoreline of Attu, Agattu, Alaid and Nizki Islands was enlarged from Chart 9198 (approximate scale 1:160,000) and fitted to the control. A shift of ½ mile in an ESE direction was necessary at Cape Wrangell on the western point of Attu Island.

Sources of location data for all control stations on the survey are listed in the descriptive report.

2. Sounding Line Crossings

Agreement at crossings is satisfactory.

3. Bottom Configuration

Bottom in this area is irregular but not markedly so. The small scale

of the survey necessitates generalization of the depth curves, but in the critical sub-areas inshore and around Ingenstrem Rocks, greater detail will be found on the large scale surveys already made or being made.

4. Adjoining Surveys

The following inshore surveys have been received in this office: H-6939 (1943-44), H-7015 (1944) and H-7018 (1944) south of Attu Island; and H-6938 (1943) and H-6987 (1944) in the vicinity of Shemya Island. H-6938, already superseded in part by H-6987, will be completely superseded when other 1944 surveys around Shemya are received and reviewed.

Agreement of the present survey with the inshore surveys is satisfactory. Because of the wide difference in scales (10:1 ratio in most cases), the usual procedure of transferring overlapping depths from the smaller to the larger scale has not been followed. Adjustment of the present survey to those inshore is more properly a matter of chart compilation.

On the east, the present survey makes a satisfactory junction with reconnaissance survey H-6935 (1943). As the ratio of scales is only 2:1 in this case the reviewer has adjusted the two surveys to perfect agreement.

5. Previous Surveys

This Bureau had not previously surveyed any part of the subject area.

6. Comparison with Chart 8865 (Print of Jan. 5, 1945)
Chart 9125 (Print of Mar. 31, 1945)
Chart 9126 (Print of June 6, 1944)
Chart 9128 (Print of June 23, 1945)
Chart 9198 (Print of Feb. 2, 1945)

Hydrographic information charted in this area is from preliminary blueprints compiled by the field party from boat sheets of the present and adjoining surveys. Differences between boat and smooth sheet depths occasionally amount to as much as 10% but none of these differences is important enough to require special corrections to the charts.

The wreck charted in lat. 52° 18', long. 173° 53' was reported in H.O. Letter 439 444. Depths of 52 fathoms on the survey at the reported position indicate that it cannot be an important danger but it should be retained on the charts.

The present survey is not too rigidly controlled at its offshore limits but it is a good survey and at this writing is basic for the area covered, except where superseded by the Bureau's own large-scale surveys. It is

probable that track lines or other information will be reported from time to time by outside sources but any such information should be carefully considered in its relation to the framework established by this survey before applying it to the chart.

7. Records and Reports

There is some intermingling of records for this survey with those of H-6935 (1943). Attached to the descriptive report is an index of records for both sheets showing parts recorded in volumes for one but plotted on the other.

As red day letters were used in the records of all ships participating in the survey, the Processing Office has made the following distinctions on the smooth sheet:

EXPLORER	Red capitals
" Escorts	Red lower case
" Launch	Blue lower case
SURVEYOR	Blue capitals
HYDROGRAPHER	Purple capitals
" Launch 2	Purple lower case

The descriptive report has been shortened by the removal of several pages of material which was of major interest only to the verifier and reviewer of this particular survey. The removed pages are preserved intact and are filed with the sounding volumes.

8. Compliance with Project Instructions

Satisfactory.

9. Additional Field Work Recommended

The systematic expansion of the project will automatically take care of any additional work which might be recommended inshore and around Ingenstrem Rocks. Offshore, attention is invited to the need for closer line spacing outside the 100-fathom curve. There are several prominent rises and depressions on the Pacific side of the island groups.

Examined and approved:

Robert W. Knox
Chief, Nautical Chart Branch

J. S. Borden
Chief, Chart Division

Earl O. Hewson
Chief, Section of Hydrography

Raymond B. Gyman
Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. H 6936

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
9/27/45	9128	J.P. Walker	~~Before~~ After Verification and Review Completely
10-26-45	9126	J.M. albert	~~Before~~ After Verification and Review "
12-6-45	9125	J.M.A.	~~Before~~ After Verification and Review
12-19-45	9198	J.M.A.	~~Before~~ After Verification and Review Partially applied. See notation in history
1/7/46	9149	L.A.W.	~~Before~~ After Verification and Review
1-29-46	8865	J.M.A.	~~Before~~ After Verification and Review Completely applied via 9198 Detail Drawing.
8-25-55	9129	J.H. Eaton	Comp. Applied to Recon. Superseded almost entirely by later work ~~Before~~ After Verification and Review
4/7/59	9128	J.H. Eaton	~~Before~~ After Verification and Review Reconstruction
			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.

6936

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

6936

Type of Survey Hydrographic

Field No. 16143 *Office No.* H-6936

LOCALITY

State Alaska - Aleutian Islands

General locality ~~Aleutian Islands~~

Locality Near Islands

Ingenstrem Rocks to Attu I.

1943

CHIEF OF PARTY

W.M.Scaife HYDROGRAPHER | G.C.Mattison EXPLORER | L.C.Wilder SURVEYOR

LIBRARY & ARCHIVES

DATE APR 11 1945

B-1870-1 (1)

Form 537
Ed. Dec. 1930

REG. NO. H6936

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. 16143

REGISTER NO. H-6936

State Alaska - Aleutian Islands

General locality ~~Aleutian Islands~~ Near Islands

Locality Ingenstrem Rocks to Atto I. ~~Near Islands~~

Scale 1:100,000 Date of survey July - Nov., 1943

Vessel HYDROGRAPHER EXPLORER SURVEYOR & ESCORT

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

Surveyed by ~~W.M.S.~~ G.C.M. R.C.K. W.D.P. L.C.W. W.F.M.
~~R.C.K.~~ S.B.G. M.G.R. C.A.G. L.S.H.
~~A.L.W.~~ G.R.S. K.S.U.

Protracted by Paul M. Fisher

Soundings penciled by Paul M. Fisher

Soundings in fathoms ~~feet~~ XXXX Fathoms

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by A.R. Stirni

Verified by A.R. Stirni

Instructions dated CS-218 - April, 1943, with additional instructions from the Liaison Officer.

Remarks:

Smooth Sheet and Plotting by the Seattle Processing Office.

U. S. GOVERNMENT PRINTING OFFICE

LIST OF CONTENTS

H-6936

Seattle Processing Office Notes

Datum-

USN 1934 approximate, assuming that station CHIC is the recovered position of the Navy astronomical station.

Control-

Triangulation in this area was executed for the Navy by the U.S.S. HYDROGRAPHER, W. M. Scaife, Commanding, and by Sylar (U.S.E.D.) in 1943, and 1944 triangulation by Horne and Meaney.

Locations of hydrographic signals on this sheet were obtained as follows: A plotting sheet at scale 1:100,000 had previously been constructed in the processing office. Cuts to hydro signals EAST, WHITE, TRI, SAB, KOL, and TOW on Agattu Island, and to signal SPIKE on Attu Island were plotted on this plotting sheet and positions scaled. The positions of these signals were plotted on smooth sheet H-6936 from these DM's and DP's. The plotting sheet was given to the EXPLORER to use as a boat sheet in 1944. The other hydro signals on Agattu Island were plotted directly on smooth sheet H-6936.

Cuts to signals HILL, BLACK, and OFF had been plotted on smooth sheet H-6939 (1:20,000 scale), and were plotted on H-6936 by DM's and DP's.

It will be noted that the apparently best intersection of cuts at hydro signal HUMP is about 450 meters north of the accepted position. This position was used at first, but in plotting the line Pos. 1-22G (EXPLORER) there was a large jump when HUMP was first used as left object. A trial plot of the line on time, course, and right angle was made, and the most satisfactory location for HUMP was determined from it. The other signals dependent upon HUMP for their location, and previously plotted hydrography, were then re-plotted.

Hydrographic Signals - West End of Attu Island-

All signals on Attu Island west of Theodore Point were located by sextant cuts. Those taken by the U.S.S. HYDROGRAPHER are dependent upon each other, so that plotting became quite involved. The signals were plotted in the following order: TENT, SPIKE, NOB, HEAD, BLUFF, JACK, WHITE, TIP, NOSE, GELL, ET, BOB, RAG, and RED.

Only three cuts were taken by the HYDROGRAPHER on hydro signal NOB on Theodore Point. No good intersection was obtained; consequently, the first attempt to smooth plot these cuts (in the winter of 1943-44) was unsuccessful, signal NOB being used in the cuts on JACK, GELL, TIP, and WHITE. However, THEODORE ASTRO 1944 is stated by the party on the EXPLORER to be the same as 1943 hydro signal NOB, and was so used in the second smooth plot of the cuts.

Due to the inter-dependence of these cuts, the correct location of signals BLUFF and JACK is most important. At first, it appeared that JACK should be located at a point about 500 meters northwest of the finally accepted position, as this point nearly agreed with the boat sheet, and was the best intersection of cuts except those from Pos. 31B and 34B. After considerable trial plotting of sounding lines and cuts, however, it was found that the finally accepted position for JACK gave good intersections on the remaining signals in the series. The accuracy of these signals for use on the scale of 1:100,000 was adequately proven by the fact that using these signals for determining the ship's position, the intersections of ten cuts to signal ABE and eleven cuts to signal CAN intersected practically at a point at each determination. Plotting critical sounding lines, using different combinations of these signals, gave positions which agree with the recorded course and time.

Shoreline-

Shoreline shown on H-6936 is approximate. The shoreline of Shemya Island was reduced from a transfer tracing at scale 1:10,000 which had been made in the processing office for use on sheet H-6938 (1943). This tracing was a reduction by steel pantograph from Army Engineers print No. N-177-P-22, natural scale 1:4800. The topography was fitted to the plotted positions of triangulation stations SEA, GUN, SHEMYA, and END.

The shoreline of Attu, Agattu, and Alaid and Nizki Islands was enlarged by pantograph from Chart 9198 (approximate scale 1:160,000) and fitted to the available control. A shift of 1/2 mile in an ESE direction was necessary at Cape Wrangell on the western point of Attu Island.

Cuts to Natural Objects-

Numerous cuts were taken by the U.S.S. HYDROGRAPHER to natural objects, such as tangents of points and bluff lines, on Attu Island and Agattu Island. As the positions of these objects were not needed for plotting the hydrography, these cuts were not plotted on the smooth sheet.

Day Letters and Colors-

The EXPLORER's records were received from the field with overlapping series of day letters between H-6935, (field No. 35143) and H-6936 (field No. 16143). Vol. 6 of H-6936 begins with Pos. 61K of the series for H-6935, and this series is continued through "N" day in Vol. 7. Vol. 8 then begins with "A" day of the series for H-6936, this series being continued through "Y" day in Vol. 14.

To avoid duplication of day letters on H-6936, L, M, and N days, in the first series, have been given an "A" prefix. The boat sheet has not been changed.

~~An index of the records is included herewith.~~

Since the records from the EXPLORER, HYDROGRAPHER, and SURVEYOR all showed day letters in red, the following procedure has been used on the smooth sheet:

EXPLORER	Red	(capital letters)
EXPLORER escorts	Red	(lower case letters)
EXPLORER launch	Blue	" " "
SURVEYOR	Blue	(capital letters)
HYDROGRAPHER	Purple	(capital letters)
HYDROGRAPHER Lch.2	"	(lower case letters)

Intermingled Records - H-6935 and H-6936-

An index of the sounding records of H-6935 and H-6936 to show the parts recorded in the volumes of one sheet but plotted on the other sheet follows this page.

Plotting of V day - EXPLORER-

This day's work from Pos. 26V to Pos. 76V lies at the southern limit of hydrography on this sheet. It is characterized by weak fixes, single angles, and on some positions only a bearing was obtained. A zigzag course was run, with 90° right or left turns about every 3 miles. It was found impractical to make a tracing paper plot of dead reckoning because of the erratic behavior of the gyro-compass where so many turns were made. Also, no log or revolution counter readings were taken. Therefore, those positions where the fixes were fairly strong and where three or four successive positions looked good for time and course, were held; the intervening positions were plotted largely by time and course. After a final location had been decided upon for the line, the bearings to shore objects were scaled off the smooth sheet and entered in blue in the record. These scaled bearings indicate corrections ranging from -2 1/2° to +2 1/4° on different segments of the line. Notes have been entered in the record showing what data was used in plotting each position. A table of these corrections follows this page.

"V" day Nov. 21, 1943

Analysis of Visual Bearings

10 ①

Vessel	Pos. No.	Recorded Bearing	Scaled Brg. From Pos.	Corr.	Course	Remarks
CYANE	1v	PAR 111°T	113¾°	+2¾°	155°	
"	3v	GAT 119°T	121¼°	+2¼°	155°	
"	4v	GAT 111°T	113½°	+2½°	175°	
"	5v	GAT 101°T	104°	+3°	194°	
"	6v	GAT 91½°	93¼°	+1¾°	194°	
"	7v	GAT 82°	82¾°	+0¾°	194°	
"	8v	GAT 72°	74°	+2°	201° (?)	Assumed course to correspond with EXP.
"	9v	GAT 68°	67½°	−0½°	201°	
"	11v	GAT 60°	58¾°	−1¼°	219° (?)	Smooth plotting indicates course 209°
"	12v	GAT 57°	55½°	−1½°	189°	
"	13v	HUMP(?) 42°	39¾	−2¼°	189°	Perhaps not HUMP
"	14v	GAT 49°	47°	−2°	189°	
EXPLORER	30V	GAT 46°	43½°	−2½°	194°	
"	31V	GAT 44°	42°	−2°	194°	simultaneous
CYANE	15v	GAT 43°(?)	43¾°	+0¾°	189°	Bearing ? in field.
EXPLORER	32V	OT 58°	55½°	−2½°	194°	
"	35V	GAT 39°	36½°	−2½°	07°	simultaneous
CYANE	17v	GAT 33°	35°	+2°	07°	
EXPLORER	36V	GAT 40°	37¾°	−2¼°	07°	
"	37V	GAT 39½°	39°	−0½°	07°	
CYANE	18v	GAT 35°	37¾°	+2¾°	07°	
"	19v	GAT 40°	40¾°	+0¾°	07°	

"V" day – bearings – continued

Vessel	Pos. No.	Recorded Bearing	Scaled Bearing from Accepted Position	Corr.	Course		Remarks
CYANE	20v	GAT 41°	39°	−2°	110°		
"	21v	GAT 37°	34½°	−2½°	185°		
"	22v	GAT 32°	29½°	−2½°	110°		
"	23v	GAT 25°	23°	−2°	110°		
"	24v	GAT 19°	21¾°	+2¾°	05°		
"	25v	GAT 22°	24¼°	+2¼°	05°		
"	26v	GAT 15°	17¼°	+2¼°	105°		
"	27v	GAT 14°	12¾°	−1¼°	182°		
"	28v	GAT 12°	10°	−2°	182°	}	simultaneous
EXPLORER	57V	GAT 13°	12°	−1°	182°	}	
"	58V	OT 27°	26°	−1°	182°		
~~CYANE~~	59V	SAB 34°	33°	−1°	110°		
"	60V	SAB 31½°	30½°	−1°	110°		
"	61V	SAB 28°	27°	−1°	110°	}	simultaneous
CYANE	30v	SAB(?) 25°	26°	+1	110°	}	SAB uncertain
EXPLORER	62 V	SAB 24½°	23½°	−1°	110°		
CYANE	31v	GAT ~~SAB~~ 01°	02½°	+1½°	0°		
EXPLORER	64V	GAT 03°	01°	−2°	0°		
"	65V	SAB 28°	27°	−1°	0°	}	simultaneous
CYANE	32v	SAB (radar) 19° *	29° *	+10°	0°	}	← * erasure in record – orig. entry looks like 29°
"	33v	SAB (radar) 22°	23½°	+1½°	97°	}	simultaneous
EXPLORER	66V	GAT 356½	357¾°	+1¼°	97°	}	

Echo Corrections - HYDROGRAPHER-

No echo corrections except draft were applied to the HYDROGRAPHER's soundings. No temperature and salinity or fathometer report was furnished for this work. The fathometers were calibrated for 800 fms. sound speed. A correction table for the EXPLORER's Hughes fathometer shows that the correction to 100 fm. depth is minus one foot, calibration of 800 fms. per second. For about four hours on "B" day and two hours on "C" day, the HYDROGRAPHER was sounding in depths greater than 100 fms; otherwise, the soundings seldom touched the hundred fathom curve.

For a discussion of the HYDROGRAPHER's sounding equipment see the report for H-6845.

Tables for corrections to the EXPLORER(s fathometer soundings are in Vol. 8; the Engstrom, in Vol. 23.

Discrepancies at Crossings-

Lat. & Long.	Pos. No.	Vessel	Depth fms.	Remarks
52° 30.2	27-28 N	EXPLORER	64-65	Slope here - Ex depth plotted
173 57.0	29-30 m	ORACLE	67-69	Oracle line controlled by two bearings only for 3 point fix
52 32.0	89-90 P	EXPLORER	58	Ex depth plotted - Oracle
173 57.4	30-31 m	ORACLE	60-72	control erratic - soundings poor
52 43.0	10-11 S	EXPLORER	43	Ledge mentes out with steep slope
173 48.9	53-54 p	ORACLE	40	shoaler sndgs plotted also born out by 1C-2C (DE18-Vol23 p 24) 8n-9n (Oracle-Vol 17 p 26)
52 45.3	107-108 E	EXPLORER	48	Oracle sndgs not plotted
173 46.1	5 s	ORACLE	55	also crosses deep with 8-9 n Oracle (Vol 17 p 26) & 13-14 N (Explorer)
52 44.7	13-14 N	EXPLORER	51-52	Same as above
173 47.1	5-6 s	ORACLE	54-57	
52 43.9	8-9 n	ORACLE	41-42	The ORACLE's line between 4 & 6 s is deeper than the lines crossed. see above
173 48.5	5-6 s	"	44-45	
52 27.8	26 p	"	70	Step slope here - Ex's depth
174 00.4	16-17 s	"	76	plotted
52 27.5	69-70 M	EXPLORER	72	Ex depth plotted - step slope
173 58.2	17-18 s	ORACLE	77	Oracle position off slightly
52 15.4	24-25 u	CYANE	318 320	Slope changing fast.
173 57.6	42-43 v	"	361	320 probably read late Shifted slightly

Discrepancies at Crossings (continued)-

Lat. and Long.	Pos. No.	Ship	Depth	Remarks
52° 49.0	13-14 b	SURVEYOR escort	Sdgs.	sndgs obviously in error do not fit adjacent lines not plotted not needed
174 00				
52 35.1	4-5 U	EXPLORER	57	Retained EXPLORER's sdg.
174 12.3	27-28 e	GILMORE	54	as being more accurate ok
52 45.6	13-14 N	EXPLORER	51-56-46	Both lines indicate
173 47.1	12-13 S	SURVEYOR	46	46 fms. shoals ok
52 48.7	14 b	GIIMORE		For 8 min. prior to Pos. 14b, sdgs.
174 02.0	This is listed above			are 100 or 200 fms. shoaler than adjacent depths; no fathogram was received for this vessel.
52 49.0	20-27 b	"		Sdgs. on this line are all about
173 48.0 to 32.0	none inted between 21 and 256			3 fms. shoaler than adjacent depths. GILMORE sdgs. have been omitted at crossings.
52 39	20-22 B	HYDROGRAPHER		Inshore line of two parallel lines
172 40 to 43.5	26-29 B	"		shows depths 30-40 fms. deeper than offshore line, in depths around 300 fms. Possibly because of different fathometers, as soundings were taken with NJ-3 fathometer up to Pos. 23B, then with NME-2 fathometer from Pos. 23B to Pos. 43B. Note discrepancy at comparison taken in same area on Pos. 34C. No fathogram is available for the NME-2 machine.
Soundings left in pencil - see attached sheet				
52 44.0	36-37 G	HYDROGRAPHER	47	King not at same place
173 24.8	1-2 y	CYANE	39	2 minute intervals on Y° line "39" plotted
52 46.0	99-100 AN	EXPLORER	51	oracle sndgs obviously in
173 44.5	4-5 s	ORACLE	56	error - see preceding page not plotted - fathometer missing
52 28.1	72-73 G	HYDROGRAPHER	94	Hughes fathogram on Ex. does
173 20.3	16-17 K	EXPLORER	103	not indicate any depth over 100 fms. not plotted
52 18.3	98-99 G	EXPLORER	182	King fathometer missing
173 15.0	23-24 K	KING	122	Retained EXPLORER's sdgs.
52 16.7	86-87 V	EXPLORER	90	steep slope
173 56.0	19-20 p	ORACLE	72	Retained " "
52 32.3	20-21 T	EXPLORER	48	Plotted shoaler sdg. There
173 52.5	8-9 r	ORACLE	32	is also a 33 fm. sdg. adjacent to the 32 fms., Pos. 11-12 y CYANE. switched fathometers on Ex 32 bears out 33

Position of Whistle Buoy off entrance to Massacre Bay-

The following is the computation of distances from the EXPLORER's positions 8L, 26L, and 136N where depression angles were observed to whistle buoy at Massacre Bay entrance. The SURVEYOR also has a position of this buoy on Page 38 of Vol. 21.

- - - - - - - - -

$$D = H \cot (a + d)$$

$$H = 29.7 \text{ ft.}$$

Pos. 8L EXPLORER (Vol. 11, H-6936)-

D = 29.7 ft. x cot 2° 05' 21"

later position by Surveyor Nov. 15, 1943 Vol 21 p. 35

log 29.7	= 1.472 7564
log cot (a+d)	= 11.437 9470
log D	= 2.910 7134
feet to meters	9.484 0158
M.	2.394 7292

D = 248.2

Pos. 26L EXPLORER (Vol. 11, H-6936)-

D = 29.7 ft. cot. 1° 47' 21"

log 29.7	= 1.472 7564
log cot (a+d)	= 11.505 3306
log D	2.978 0870
feet to meters	9.484 0158
M.	2.462 1028

D = 289.8

Pos. 136 AM EXPLORER (Vol. 4, H-6935)-

D = 29.7 ft. cot. 7° 33' 21"

log 29.7	= 1.472 7564
log cot (a-d)	= 10.877 3124
log D	= 2.350 0688
feet to meters	.484 0158
M.	1.834 0846

D = 68.2 m.

Position of Ingenstrem Rock--

This rock depends on intersection of bearings from positions 55E to 63E. The line itself was controlled by three point sextant fixes to Pos. 54E. On positions 55E, 56E, and 57E, the line is determined by single sextant angles, course, log distance, and time. Positions 58E to 60E are dead reckoning points.

Meanwhile, the escort vessel was anchored and used as signal ANDREW. The position of ANDREW is plotted from fix 28e (blue), page 44, Vol. 23. The position was closely verified by sextant cuts from the SURVEYOR at Pos. 51E to 54E during which time the SURVEYOR had reliable fixes.

Positions 61E to 67E of the SURVEYOR's line were plotted from single sextant angles, bearings, and distances to the anchored vessel - reciprocal bearings and distances were also taken from the anchored ship to the SURVEYOR.

The position of Ingenstrem Rock then depends on the plotting of the SURVEYOR's line from 55E to 67E. It is believed to be substantially correct. See the bearing at Pos. 25e, Vol. 23, page 43. Aside from the importance of its position as a danger, it is also important to the plotting of lines on H-6935 between Ingenstrem Rocks and Buldir where it is a controlling point. The record refers to this point as the "highest of Ingenstrem Rocks," and to the"highest of five rocks of Ingenstrem Rocks," and an officer has spoken of it as"a tight cluster of rocks about as big as this room."

The sunken rock 1200 meters to southeast is mentioned as the "east breaker." It is plotted from the intersection of bearings from SURVEYOR's positions 21Q to 24Q.

Following this page is a letter concerning the height of Ingenstrem Rocks.

We suggest that Commander Durgin, who has flown over this area, be consulted about these rocks. He is now in the Washington Office (March 1945).

Breakers off Northeast Point of Agattu I.-

Two breakers are shown off Krugloi Point at the N.E. end of Agattu I. Cuts to these breakers are recorded on Pos. 56-66 K, EXPLORER, Vol. 11. The intersection of these cuts was poor.

Breaker in Otkriti Bay-

On Pos. 109 M, EXPLORER, page 70, Vol. 11, a cut to a breaker is recorded, but no distance is given nor were any other cuts to this rock found. It lies in Otkriti Bay on the south coast of Agattu Island. The distance from Pos. 109M has been scaled from the boat sheet and plotted on the smooth sheet for lack of further information.

Sunken Rock on Boat Sheet - Investigation by the KING-

A sunken rock is shown on the HYDROGRAPHER's boat sheet (HO Misc. No. 10 253-1) 8 1/2 miles S by E from triang. station NEV. This area was investigated by the U.S.S. KING; no shoal was found; depths range from 60 to 70 fms. See Vol. 16, page 36.

Ten Fathom Shoal-

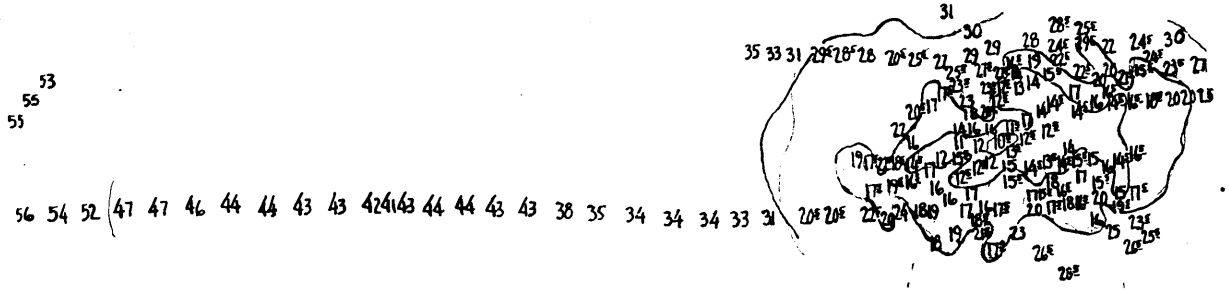
There is a 10 8/10 fm. sounding at Lat. 52° 37'.15 Long. 173° 08'.63. It was developed by launches from the HYDROGRAPHER and EXPLORER, and all positions were pricked on H-6936. All of the EXPLORER's soundings which could reasonably be plotted were placed on this sheet, but only the two shoalest soundings of the HYDROGRAPHER's work were penciled.

Then on the 1:40,000 scale sheet H-7018, all the HYDROGRAPHER's launch work on "d" day and the EXPLORER's launch work from positions 1a to 23 a were plotted. The position of the shoalest sounding given above was scaled from H-7018. A tracing of the soundings on this shoal plotted on H-7018 is attached to this report. - Next Page -

Tracing of 10 8/10 Fm shoal
10 miles South of Krasni Pt.
as plotted on 1/40,000
Sheet H 7018

For Report
H6936

52 38



52°36'

173° 10'

173 04

06

08

A Tracing of the area around the the 10½ fm shoal 10 miles south of KRASNI POINT.

Traced from H-7018 (1/40,000)

Cuts to Signals - S. coast Attu I

To be plotted on Sheet - H-6936 - scale 1:100,000

Cuts by HYDROGRAPHER

Bob (Highest point island off shore)

80 D	
Nev	71-49
White	
Jack	55-08
White to Bob	56-23
82 D	
Nev	61-04
White	
Jack	64-36
White - Bob	66-01
89 D	
Nev	42-56
Nose	
Jack	58-50
Nose - Bob	60-56

Bluff

46 A	
Tem	30-15
Nev	
Head	46-00
Head - Bluff	~~000~~
49 A	
Fox	14-28
Tem	
Head	80-32
Tem - Bluff	80-26
55 A	
Wow	23-09
Little	
Nev	86-46
Little - Bluff	95-55
56 A	
Wow	22-35
Little	
Nev	92-27
Tan. Theodore Pt. - Bluff	~~000~~
10 B	
Arm	108-42
Pin	
Nev	53-29
Pin - Bluff	69-54
Gell ~~000~~	
11 B	
Fox	19-42
Tem	
Nev	49-26
Tem - Bluff	69-54
14 B	
Fox	13-52
Tem	
Nev	39-26
Tem - Bluff	71-44

Head (Sharp pt. on Bluff opposite BLUFF ?)

21 A		
~~Fox~~ Over	12-00	No Over found. Apparently used Fox on B.S.
Tem		
? Nev	31-00	
mild Tem - Head	65-25	
23 A		
Fox	13-42	
Tem		
Nev	40-16	
Tem - Head	73-43	
27 A		
Fox	14-40	
Tem		
Nev	63-47	
Tem - Head	93-53	
30 A		
Fox	20-31	
Tem		
Nev	84-32	
Tem - Head	96-43	

Cuts by HYDROGRAPHER

Et

33 C

Wow	20-40
Nev	
Jack	71-33
Nev. to Sh. Pk rt. of Gell	64-23

55 C

Fox	29-05
Tem	
Nev	53-00
Tem. Sh. Pk rt. of Gell	56-55

24 D

Wow	26-23
Tem	
Nev	39-23
Tem-Sh. Pk rt. of Gell	63-24

88 D

Nev	38-42
Nose	
Jack	65-08
Nose-Sh. Pk.	41-47

100 D

Nev	27-23
Nose	
Jack	83-30
Nose-Et.	~~38~~-53 48-

1944 sheet H-7018 (EX-4144) Vol. 5 - page 53

41 F

LITTLE	25-12
TEMNAC	
ASTRO	53-12
ASTRO-ET	09.31

also P. 30 and 31 C EX. [illegible] ABE

Gell

51 A

Fox	18-50
Tem	
Nev	56-28
Tem-Gell	78-43

10 B

Arm	108-42
Pin	
Nev	53-29
Pin-Bluff Gell	69-54

16 B

Wow	47-17
Nev	
Bluff	39-19
Nev-Gell	51-46

22 B

Wow	13-16
Nob	
Bluff	37-42
Nob-Gell	75-08

37 B

Arm	36-18
Nob	
Jack	75-47
Nob-Gell	71-42

21 C

Wow	28-45
Tem	
Nev	46-04
Probably cut Tem-Gell	68-46

27 C

Wow	18-18
Tem	
Nev	31-15
Tem-Gell	79-05

Gell (cont.)

56 C

Fox	30-13
Tem	
Nev	55-23
Tem-Gell	59-41 WILD

9 D

Wow	43-45
Tem	
Nev	49-12
Tem-Gell	53-38

23 D

Wow	28-20
Tem	
Nev	40-29
Tem-Gell	63-26

64 D

Wow	23-50
Tem	
Nev	47-30
Tem-Gell	79-31

116 D

Gat	61-01
Nev	
Jack	93-12
Nev-Gell	90-19

106 D

NEV	47-49
WHITE	
JACK	60-09
White-Gell	53-25

also 87 D and 99 D NOSE

FROM sheet H-7018 (EX-4144) Vol. 5 p. 52

40 F LITTLE 27-14
TEMNAC 54-34
ASTRO 54-34
ASTRO-GELL 07-45

Cuts by HYDROGRAPHER

Jack

18 A
Fox 10-23
Tem
Nev 34-34 WILD
Tem-Jack 92-53 (connection bad)

19 A
Fox 11-04
Tem
Nev 34-23
Tem-Jack 88-13

20 A
Fox 09-51
Nac
Nev 34-23 WILD
Nac-Jack 85-04

27 A
Fox 14-40
Tem
Nev 63-47
Tem-Head 93-53
Jack

44 A
Tem 14-46
Nev
Head 52-52
Nev-Jack 78-53

19 B
Wow 28-20
Nev
Bluff 43-08
Nev-Jack 69-42

21 B
Wow 15-04
Nob
Bluff 40-05
Nob-Jack 77-55

Jack (cont.)

31 B
Arm 49-59
Nob
Bluff 31-37
Nob-Jack 78-51

34 B
Arm 42-00
Nob
Bluff 23-42 (3 ← To check Time & Course P.M.R.)
Nob-Jack 73-42

27 C
Wow 18-18
Tem
Nev 31-15
Tem-Jack 81-08

64 D
Wow 23-50
Tem
Nev 47-30
Tem-Jack 81-17

41 C
GAT 73-16
TEM
JACK 78-31
TEM-NEV 28-40

Nob

66 A
Wow 32-36
Flag
Pin R 58-10
Flag-Nob 108-51

70 A
Flag 87-03
Little
Pin 51-45
Little-Nob 64-10

4 B
Fox 26-38
Pin
Nev 89-50
Pin-Nob 95-14

Cuts by HYDROGRAPHER (except *)

Nose		Rag		Red	
65 B		103 D		104 D	
Tip	58-52	Nev	45-42	Nev	49-41
White		Nose		Nose	
Jack	84-33	Jack	72-07	Jack	61-54
White-Nose	17-32	Rag-Nose	39-27	Red-Nose	34-17
68 B		117 D		108 D	
Tip	86-10	Gat	68-03	Nev	56-35
White		Nev		White	
Jack	59-08	Jack	87-12	Jack	54-24
White-Nose	21-45	Nev-Rag	06-31	Red-White	34-26
76 B		22 A		*40 A- Explorer	
Nob	111-40	Fox	14-00	Nev	87-27
Bluff		Tem		White	
Jack	20-06	Nev	36-21	Jack	25-01
Bluff-Nose	07-57	Tem-Rag	32-56	Nev White-Red	51-43
87 D		54 A			
Nev	37-38	Wow	36-43		
Nose		Tem			
Jack	68-16	Nev	64-16		
Nose-Gell	57-37	Tem-Rag	53-18		
99 D					
Nev	22.58				
Nose					
Jack	74-03				
Nose-Gell	58-26				

used for GELL

once a good intersection for NOSE was obtained from the first 3 cuts shown, No. 87D and 99D were used to give additional cuts on GELL

Cuts by HYDROGRAPHER

Spike		Tent		Tip	
65 A		25 A		73 B	
Wow Flag	33-05	Fox Tem	12-16	Nob White	107-24
Pin	45-25	Nev	47-12	Jack	29-48
Flag-Spike	65-45	Tem-Tent	56-42	Tip-White	109-22
68 A		26 A		76 B	
Wow Flag	27-20	Fox Tem	13-26	Nob Bluff	111-40
Pin	92-33	Nev	55-46	Jack	20-06
Flag-Spike	100-08	Tem-Tent	66-23	Tip-Bluff	113-57
3 B		28 A		82 B	
Dome Pin	41-04	Fox Tem	15-55	Wow Tent	82-27
Nev	88-29	Nev	70-29	Bluff	33-46
Pin-Spike	45-18	Tem-Tent	81-19	Tip-Tent	05-44

Cuts by HYDROGRAPHER

White

✓ 30 B
Arm 52-56
Nob
Bluff 34-14
Nob-White 50-27

✓ 41 B
Arm 27-10
Nob
Jack 86-32
Nob-White 40-42

✓ 35 B
Arm 39-55
Nob
Jack 71-18
Nob-White 39-55

106 D
Nev 47-49
White
Jack 60-09
White-Gell 53-28

used for cut on GELL since a good intersection for © WHITE was obtained from the other 4 cuts, this fix was used to give an additional cut on GELL.

✓ 114 D
NEV 72-27
WHITE
JACK 31-31
GAT-WHITE 119-43

plotted — GAT 47-16
NEV
JACK 103 58
NEV-WHITE 72-27

Cuts by EXPLORER

Abe

37 A	
Nev	88-48
White	
Jack	38-12
Abe-White	33-31
38 A	
Nev	90-38
White	
Jack	33-17
Abe-White	29-42
24 C	
Nob	78-17
White	
Jack	41-43
Abe-Jack	71-50
25 C	
Nob	74-10
White	
Jack	47-18
Abe-Jack	78-36
27 C	
Nob	62-35
White	
Jack	59-06
Abe-Jack	88-40
28 C	
Nob	55-53
White	
Jack	64-18
Abe-Jack	91-25
29 C	
Nob	49-15
White	
Jack	68-00
Abe-Jack	92-10

Abe (cont.)

30 C	
Nev-Et	87-23
Nev-Jack	108-54
Nev-Abe	18-54
31 C	
Nev-Et	84-31
Nev-Jack	104-43
Nev-Abe	19-07
41 C	
Nev	68-19
White	
Jack	34-14
Nev-Abe	44-32
42 C	
Nev	68-26
White	
Jack	31-06
Nev-Abe	46-25
43 C	
Nev	67-37
White	
Jack	28-20
Nev-Abe	47-32

* used as cuts on ⊙ ET

* since a good intersection for ⊙ ABE was obtained from the other 10 cuts, Pos. 30 C and 31 C were used to give additional cuts on ET

Can

26 D	
Gat	45-41
Can	
Et	28-55
Can-Gell	30-47
37 D	
Gat	66-15
Ridge	
Gell	71-16
Ridge-Can	25-09
39 D	
Gat	73-00
Ridge	
Gell	75-41
Ridge-Can	27-50
34 F	
Gat	80-30
Rag	
Gell	32-30
Can-Gell	42-24
40 D	
Gat	76-40
Ridge	
Gell	77-59
Ridge-Can	29-44
41 D	
Gat	80-18
Ridge	
Gell	80-19
Ridge-Can	31-36
42 D	
Gat	84-42
Ridge	
Gell	81-53
Ridge-Can	33-40

check only

no Id

(continued)

Cuts by EXPLORER

Can (cont.)

44 D	
Gat	94-21
Ridge	
Gell	84-18
Ridge-Can	38-17
45 D	
Gat	96-23
Ridge	
Gell	87-29
Ridge-Can	41-05
46 D	
Aid	38-15
Ridge	
Nev	89-29
Ridge-Can	44-17
47 D	
Aid	38-06
Ridge	
Nev	96-47
Ridge-Can	48-01
50 D	
Wow	83-17
Pin	
Nev	43-24
Wow-Can	67-03
52 D	
Wow	122-18
Pin	
Nev	27-11
Wow-Can	85-48

Hal

17 J	
Ridge	42-35
New	
Gell	53-24
Hal-Gell	33-55
18 J	
Ridge	36-40
New	
Gell	58-49
Hal-Gell	34-40
19 J	
Ridge	65-17
Aid	
Gell	28-56
Hal-Aid	12-15
20 J	
Ridge	57-25
Aid	
Gell	33-42
Hal-Aid	13-34
21 J	
Ridge	49-47
Aid	
Gell	37-19
Hal-Aid	13-55
23 J	
Arm	50-44
Nev	
Gell	69-05
Nev-Hall	15-06
24 J	
Arm	45-43
Nev	
Gell	66-15
Nev-Hal?	13-30

Mat

27 J	
Arm	48-45
Nev	
Gell	60-10
Nev-Mat	06-12
28 J	
Arm	53-40
Nev	
Gell	62-57
Nev-Mat	06-20
29 J	
Arm	59-53
Nev	
Gell	64-36
Nev-Mat	06-14
30 J	
Arm	67-41
Nev	
Gell	64-33
Nev-Mat	05-45

Respectfully submitted,

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