

6869

Diag'd on Diag. Ch. No. 9198

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic
Field No. EX-4145 Office No. 6869

LOCALITY

State Alaska - Aleutian Islands
General locality Attu Island (South Coast)
Locality Theodore Point to Cape Wrangell

194 5

CHIEF OF PARTY

Roland D. Horne

LIBRARY & ARCHIVES

DATE MAR 11 1946
SEP 20 1945

B-1870-1 (1)

6869

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

HYDROGRAPHIC TITLE SHEET

H6869

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-6869

Field No. EX 4145

State ALASKA - ALEUTIAN ISLANDS ✓

General locality ATTU ISLAND (SOUTH COAST) ✓

Locality THEODORE POINT TO CAPE WRANGELL ✓

Scale 1:40,000 Date of survey 7 June to 11 August 1945

Instructions dated CS-218; Supplemental 12 April 1945 (sub. project #5) Liaison Officer

Vessel U.S.C. & G.S.S. EXPLORER

Chief of party Roland D. Horne ✓

Surveyed by L.S. Hubbard, W. Weidlich ✓

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

Protracted by Marion T. Gwinn

Soundings penciled by Marion T. Gwinn

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

REMARKS:

Smooth Sheet and Plotting by the Seattle Processing Office

6869

Descriptive Report
to
Accompany Hydrographic Survey H-
(Field No. EX-4145)

Alaska, Attu Island (South Coast), vicinity of Theodore Point
to Cape Wrangell.

1945

Scale - 1:40,000

U.S.C. & G.S.S. EXPLORER

Roland D. Horne, Comd'g.

Surveyed by: L.S. Hubbard
W. Weidlich

A. Project:

C.S.-218; Supplemental Instruction dated 12 April
1945 (sub. project #5) Liaison Officer.

B. Survey Limits and Dates:

Locality - Alaska, Attu Island (South Coast), off-
shore area lying between Theodore Point and Cape Wrangell and
defined within the limits: to the eastward by a north-south line
lying $1\frac{1}{2}$ miles to eastward of Theodore Point; to southward by a
southeast-northwest line lying approximately $10\frac{1}{2}$ miles offshore
from Theodore Point, Chuniksak Point, Mikhail Point and Cape
Wrangell respectively; to the westward by a north-south line
lying 3 miles to westward of Cape Wrangell; to the northward by
an irregular limit-line extending in a general southeast-north-
west direction and lying 1 to 4 miles, 3 miles, 3 miles and $1\frac{1}{4}$
miles offshore from Cape Wrangell, Mikhail Point, Chuniksak Point
and Theodore Point respectively. See index-limit sheet attached.

Hydrography was executed during the period 7 June -
11 August 1945.

See index-limit sheet for junctures with and scales
of contemporary surveys.

Junctures with contemporary surveys: to the ^{north-}eastward
with H-7015, scale 1:20,000 and Field No. EX-4144, ^{H-7018} scale 1:40,000;
to the southward with H-8936, scale 1:100,00; to the ^{north-}westward
Field No. EX-2345, ^{H-8845} scale 1:20,000; to the northward with H-
7015, scale 1:20,000, Field No. EX-1145, ^{H-8842} scale 1:10,000, Field
No. EX-2145, ^{H-8848} scale 1:20,000, Field No. EX-2245, ^{H-8844} scale 1:20,000,
Field No. EX-1345, ^{H-8843} scale 1:10,000.

C. Vessel and Equipment:

The vessel, U.S.C. & G.S.S. EXPLORER, executed the hydrography.

The turning radius of Explorer is 275 and 380 meters to port and starboard respectively. The vessel's sounding speed varies between 10 knots on inshore lines to $12\frac{1}{2}$ knots on off-shore lines. No appreciable variation in turning radius was observed within the limits of speeds utilized.

The N.M.C. (U.S. Navy) and 808 (C. & G.S. No. 60) fathometers, both graphic recorders, were used by Explorer. The 808 fathometer was confined to the inshore areas and changes from 808 to N.M.C. were made at 150 fathoms running offshoreward. On shoreward lines the change from N.M.C. to 808 fathometer occurred at approximately 120 fathoms depth. The depths were graphically recorded in fathoms.

D. Tide Station:

Reduction of tides throughout the area of this survey were based on standard gage, maintained at Massacre Bay.

E. Smooth Sheet:

Future function of Processing Office.

F. Control Stations:

Datum U.S.N. Gannet 1934. Local triangulation Roland D. Horne 1944 and 1945. Local topographic control, graphic method, Registry No's T-6969A (1:20,000), T-6970 (1:20,000) and Field No's EX-B-45 (1:20,000), EX-R-45 (1:10,000), EX-C-45 (1:20,000), EX-D-45 (1:20,000) and EX-F-45 (1:10,000). Topographic control supplemented by air photographs flown by U.S. Navy 1944-1945. { T-7006 a+b
T-7007 a+b
T-7008

G. Shoreline and Topography:

No shoreline or topography is required for this survey except certain topographic signals as located on topographic sheets listed under HP F Control Stations, this report.

H. Soundings:

Soundings were graphically recorded in fathoms throughout. Standard methods and practices in accordance with "Special Publication No. 143 Revised 1942" were followed.

I. Control of Hydrography:

Standard sextant-fix practices for position determination were executed in accordance with "Special Publication No. 143 Revised 1942".

J. Adequacy of Survey:

This survey is complete, requires no further work and is adequate to supersede prior surveys for charting. ✓

The area of this survey was formerly covered by an exploratory survey, at scale of 1:100,000 (H-6936), during the 1943 field season. The 1943 survey was executed by the Hydrographer U.S.N. and the Explorer. Control, particularly for the western portion, was obtained by sextant cuts, ship to shore, of mountain peaks. Subsequent triangulation of mountain peaks showed the western portion of this survey to have an error in azimuth. Consideration of this azimuthal error was made when soundings from H-6936 were transferred to the present survey for comparison. The 1945 survey rigidly controlled by triangulation and topography, in general, indicated deeper depths varying up to approximately 10 fathoms. It is probable that these differences may be eliminated on closer agreement obtained after the former hydrography (H-6936) is rephotographed utilizing the final locations of signals.

The juncture between hydrographic surveys EX-^{H-6869} 4145 and H-7018 (1944), along the 172°58'.1 meridian, indicates ^{satisfactory} discrepancies varying up to 5 fathom maximum. These discrepancies ^{junction} may partly be explained: by the displacement of soundings as plotted on boatsheet H-7018 (as explained in Descriptive Report of same) and transferred to this survey for comparative purposes; by the errors normally introduced in reduction of soundings for the boat sheet, with regard to preliminary data pertaining to velocity corrections, tides, settlement and draft.

^{H-6866} For junctures with hydrographic sheets ^{H-6872} EX-2245, ^{H-6868} EX-1145 and ^{H-6865} EX-1345 see Descriptive Reports pertaining to the particular survey.

Depth curves can be adequately drawn on the boat sheets at the junctures with the exception previously noted. ✓

K. Crosslines:

Crosslines are adequate and in close agreement. ✓

L. Comparison with Chart:

No previous survey existed ✓

M. Dangers and Shoals:

No dangers or shoals were revealed by the survey. ✓

Respectfully submitted,

L.S. Hubbard

L.S. Hubbard,
Lt. Comdr., C&GS.

W. Weidlich

W. Weidlich,
Mate, C&GS.

Approved and forwarded:

Roland D. Horne

Roland D. Horne,
Comdr., C&GS.

Statistics for Hydrographic Survey H-
Field No. EX-4145, U.S.C. & G.S.S. EXPLORER

Survey Unit	Vol.	Day letter	Date 1945	Number Position	No. Sta. miles sdg. lines	Area Sq. Sta. miles.
Explorer	1	A	June-7	123	72.0	
"	1	B	June-8	94	55.7	
"	1&2	C	June-9	150	95.5	
"	2	D	June-12	7-V.C.		
"	2	E	June-17	111	76.0	
"	2	F	June-22	21	9.2	
"	2	G	June-23	68	44.2	
"	3	H	June-24	45	28.1	
"	3	J	June-25	58	38.0	
"	3	K	June-26	72	48.4	
"	3	L	July-6	46	45.7	
"	3&4	M	July-7	128	88.5	
"	4	N	July-12	103	78.0	
"	4	P	July-16	116	65.5	
"	4&5	Q	July-17	136	92.0	
"	5	R	Aug.-1	74	33.3	
"	5	S	Aug.-10	144	98.8	
"	5	T	Aug.-11	18	12.7	
			Totals:	1507	981.6	297.5

Tide Notes

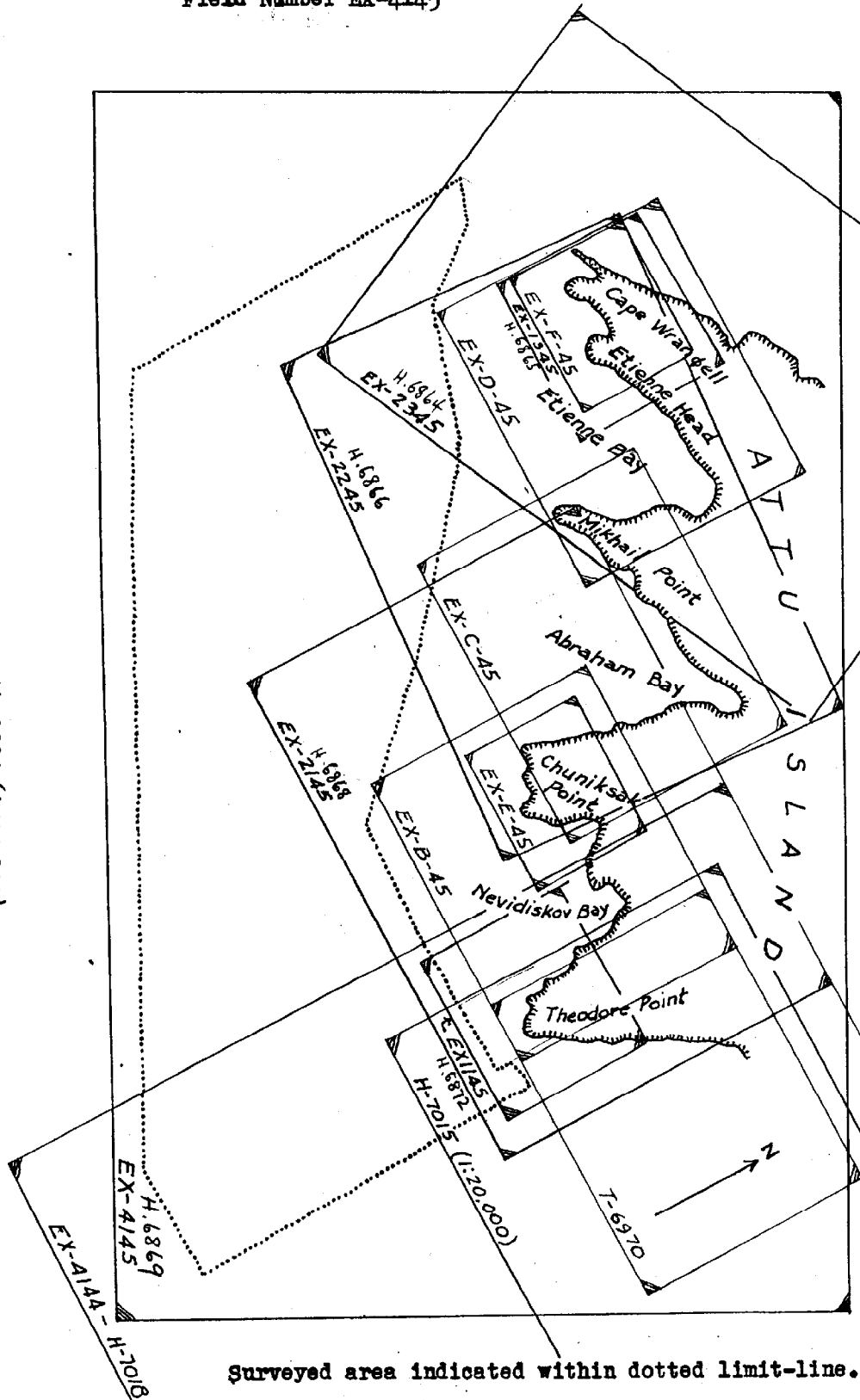
The reduction of soundings for Hydrographic Sheet, Reg. No. 6869 (Field No. EX-4145) were based on tide data from standard gage, #401, maintained at Massacre Bay (Navy pier #2), Attu Island, Alaska. Latitude 52°51' N, longitude 173°12' E.

The hourly heights for reduction of records were scaled from tide gage record. The plane of reference, M.L.L.W. is 3.4 ft. on tide staff in accordance with Director's letter dated 13 January 1945, ref. 36m.l.h.. All times, for the operation of tide gage and execution of hydrography were based on the 150° W. meridian time.

Geographic Names

INDEX SHEET
 to
 Accompany Hydrographic Sheet
 Field Number EX-4145

*offshore H-6936 (1:100,000)
 exploratory*



Surveyed area indicated within dotted limit-line.

17 JAN 1965

NMC		300 fms/sec.	
fms.		fms.	
266	to	290	2.0
271	to	275	+0.5
276	to	350	+1.0
351	to	430	+1.5
431	to	433	+2.0
437	to	555	+2.5
553	to	600	+3.0
591	to	645	+3.5
643	to	690	+4.0
691	to	735	+4.5
733	to	770	+5.0
771	to	895	+5.5
893	to	942	+6.0
943	to	970	+6.5
970	to	995	+7.0
993	to	945	+7.5
943	to	972	+8.0
973	to	1000	+8.5
1001	to	1025	+9.0
1023	to	1052	+9.5
1050	to	1030	+10.0
1031	to	1110	+10.5
1111	to	1134	+11.0
1135	to	1160	+11.5
1161	to	1104	+12.0
1103	to	1200	+12.5
1200	to	1223	+13.0
1223	to	1250	+13.5
1251	to	1273	+14.0
1274	to	1295	+14.5
1293	to	1314	+15.0
1315	to	1337	+15.5
1333	to	1355	+16.0
1353	to	1373	+16.5
1373	to	1393	+17.0
1393	to	1417	+17.5
1413	to	1433	+18.0
1437	to	1453	+18.5

NMC		300 fms/sec.	
fms.		fms.	
1457	to	1475	+19.0
1470	to	1493	+19.5
1494	to	1511	+20.0
1512	to	1530	+20.5
1531	to	1543	+21.0
1549	to	1564	+21.5
1565	to	1581	+22.0
1582	to	1593	+22.5
1599	to	1613	+23.0
1614	to	1630	+23.5
1631	to	1647	+24.0
1643	to	1635	+24.5
1633	to	1632	+25.0
1633	to	1699	+25.5
1700	to	1712	+26.0
1713	to	1723	+26.5
1729	to	1743	+27.0
1744	to	1759	+27.5
1760	to	1774	+28.0
1775	to	1783	+28.5
1789	to	1803	+29.0
1804	to	1817	+29.5
1818	to	1830	+30.0
1831	to	1844	+30.5
1845	to	1856	+31.0
1857	to	1869	+31.5
1870	to	1882	+32.0
1883	to	1895	+32.5
1896	to	1905	+33.0
1903	to	1916	+33.5
1917	to	1923	+34.0
1929	to	1939	+34.5
1940	to	1950	+35.0
1951	to	1959	+35.5
1960	to	1970	+36.0
1971	to	1980	+36.5
1931	to	1989	+37.0
1990	to	2000	+37.5

17 JUNE 1945

SLIP

808 - 820 fms/sec.

<u>fms.</u>		<u>fms.</u>	
10.0	to	14.2	-0.2
14.3	to	19.2	-0.3
19.3	to	24.2	-0.4
24.3	to	33.5	-0.6
33.6	to	42.6	-0.8
42.6	to	50.8	-1.0
50.9	to	59.2	-1.2
59.3	to	67.2	-1.4
67.3	to	75.6	-1.6
75.9	to	84.2	-1.8
84.5	to	92.6	-2.0
92.7	to	100.8	-2.2
100.9	to	117.0	-2.6
117.1	to	136.5	-3.0
136.6	to	156.5	-3.5
156.6	to	175.5	-4.0
175.6	to	195.2	-4.5
195.3	to	200.0	-5.0

LAUNCHES

808 - 820 fms/sec.

<u>fms.</u>		<u>fms.</u>	
0.0	to	2.5	-0.0
2.6	to	7.4	-0.1
7.5	to	12.5	-0.2
12.6	to	17.5	-0.3
17.6	to	22.7	-0.4
22.8	to	27.2	-0.5
27.3	to	32.2	-0.6
32.3	to	40.2	-0.8
40.3	to	48.6	-1.0
48.7	to	57.0	-1.2
57.1	to	65.5	-1.4
65.6	to	73.7	-1.6
73.8	to	82.0	-1.8
82.1	to	90.6	-2.0
90.7	to	99.0	-2.2

EX 4145

H-6869

Theodore Pt. to Cape Wrangell


Seattle Processing Office Notes

Shoreline-

The shoreline is taken from the inshore boat sheets made in the field. This shoreline was transferred from field inspected photographs and was used on the preliminary charts issued in the field. It is not derived from a radial plot but it is the best source available to the Processing Office. It is shown in pencil.

The sheet is simple and clear. The pertinent remarks have been made by the field party. It needs no further explanation.

Respectfully submitted,


Edgar E. Smith
Cartographic Engineer
Seattle Processing Office

Approved and Forwarded,



F.B.T. Siems
Officer in Charge,
Seattle Processing Office

H-6869

EX 4145

Attu Island

Theodore Point to Cape Wrangell

Geographic Names Penciled on the Smooth Sheet

Pacific Ocean

Attu Island

Bering Sea

Cape Wrangell

Wrangell Cove

Etienne Head

Etienne Bay

Mikhail Point

Abraham Bay

Chunuksak Point

Nevidiskov Bay

Theodore Point

GEOGRAPHIC NAMES

Survey No. **H6869**

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
<u>Abraham Seavalle</u>												1
												2
<u>Attu Island</u>									USGB			3
<u>Cape Wrangell</u>												4
<u>Etienne Bay</u>									USGB			5
<u>Abraham Bay</u>									"			6
<u>Nevidiskov Bay</u>									"			7
<u>Theodore Pt.</u>									"			8
<u>Etienne Head</u>									"			9
<u>Mikhail Pt</u>												10
<u>Chuniksak Pt.</u>									"			11
												12
												13
												14
												15
												16
<u>Massacre Bay</u>												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27

Names underlined in red approved
by L Heck on 7/12/46

(location of tide staff)

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ...**H6869**

Records accompanying survey:

Boat sheets .1...; sounding vols. ..5...; wire drag vols.;
 bomb vols.; graphic recorder rolls .3...;
 special reports, etc.

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

Number of positions on sheet		..1507.
Number of positions checked		..65...
Number of positions revised		..21..
Number of soundings revised (refers to depth only)		..5...
Number of soundings erroneously spaced		...0...
Number of signals erroneously plotted or transferred	0
Topographic details	Time	..0...
Junctions	Time	..14..
Verification of soundings from graphic record	Time8

Verification by *Herbert W. Burgoyne*... Total time *153*... Date *4/13/46*..

Reviewed by *J. F. Jordan*... Time *15*... Date *4/24/46*..

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6869

FIELD NO. EX-4145

Alaska - Aleutian Islands, Attu Island, Theodore Pt. to
Cape Wrangell

Surveyed in June to August 1945 Scale 1:40,000

Project No. CS-218

Soundings:

808 Fathometer
NMC Fathometer

Control:

Three-point fixes on shore
signals

Chief of Party - R. D. Horne
Surveyed by - L. S. Hubbard and W. Weidlich
Protracted by - M. T. Gwinn
Soundings plotted by - M. T. Gwinn
Verified and inked by - H. W. Burgoyne
Reviewed by - G. F. Jordan, June 24, 1946
Inspected by - H. W. Murray

1. Shoreline and Control

Origin of the control and the pencilled shoreline is thoroughly explained in the descriptive report.

2. Sounding Line Crossings

Excellent.

3. Depth Curves and Bottom Configuration

Depth curves could be satisfactorily drawn.

The bottom in the area of this offshore survey is a smooth slope entrenched by two submarine valleys. A peculiarity of the large valley heading towards Abraham Bay is the pronounced broadening between the 1000 and 1100-fm. curves. The minor valley off Etienne Bay is outlined by a portion of the 120-fm. curves.

4. Junctions

Satisfactory junctions are effected on the northwest with H-6864 (1945), on the northeast with H-7015 (1945), on the east with H-7018 (1945), and on the east and south with H-6936 (1943). Other surveys on the north either have not been verified or have not been received.

H-6936 (1943) is an exploratory survey on a scale of 1:100,000 and is superseded by the present survey within the overlapping area.

5. Prior Surveys

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

6. Comparison with Chart 9149 (Print date of Feb. 23, 1946)
Chart 9129 (Print date of Nov. 24, 1945)
Chart 9198 (Print date of Feb. 2, 1945)

a. Hydrography

Charted soundings originate with advance information on recent surveys and are in substantial agreement with verified soundings on the smooth sheet.

b. Aids to Navigation

No aids are charted within the limits of the present survey.

7. Condition of Survey

- a. The sounding records are complete, neat and legible.
- b. The descriptive report is complete in all detail.
- c. The smooth plotting was very good.
- d. Only five bottom characteristics were obtained within the 300 square miles of this offshore survey.

8. Compliance with Project Instructions

The survey satisfactorily complies with the instructions for the project.

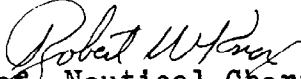
Attention is directed to paragraph 3842 of the Hydrographic Manual, especially to the seventh and tenth sub-paragraphs, regarding bottom characteristics.

9. Additional Field Work Recommended

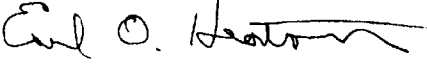
This is an excellent basic survey.

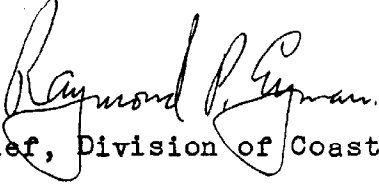
No additional work is recommended. (See par. 7d, above).

Examined and approved:


Chief, Nautical Chart Branch


Chief, Chart Division


Chief, Section of Hydrography


Chief, Division of Coastal Surveys

HWM

TIDE NOTE FOR HYDROGRAPHIC SHEET

15 March 1946

~~Division of Hydrography and Topography:~~

Division of Charts: H. W. MURRAY

Plane of reference approved in
5 volumes of sounding records for

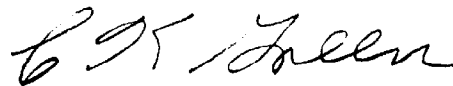
HYDROGRAPHIC SHEET 6869

Locality South Coast of Attu Island, Aleutian Is., Alaska

Chief of Party: R. D. Horne in 1945
Plane of reference is mean lower low water, reading
3.4 ft. on tide staff at Massacre Bay
6.8 ft. below B. M. 1

Height of mean high water above plane of reference is 3.4 feet.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

