

8240

Diag. Cht. No. 8863-3.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. EX-2655 Office No. H-8240

LOCALITY

State Aleutian Islands, Alaska

General locality Kagalaska and Little Tanaga Islands.

Locality Little Tanaga Strait and Approaches

1945

CHIEF OF PARTY

S. B. Grenell

LIBRARY & ARCHIVES

DATE May 28, 1957

8240

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-8240

Field No. -2655
EX-25/155

State Aleutian Islands, Alaska

General locality Kagalaska and Little Tanaga Islands

Locality Little Tanaga Strait and Approaches

Scale 1:25,000 Date of survey 15 June to 14 Sept. 1955

Instructions dated 16 December 1954

Vessel SHIP EXPLORER

Chief of party S. B. Grenell

Surveyed by S.B. Grenell, K.B. Jeffers, F.X. Popper, G.E. Haraden and H.A. Garcia

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

Fathograms scaled by Fathometer Readers

Fathograms checked by K. B. Jeffers, G. E. Haraden, H. A. Garcia

Protracted by G. E. Haraden and H. C. Parsons

Soundings penciled by G. E. Haraden and H. C. Parsons

Soundings in fathoms ~~feet~~ at ~~MLLW~~ based on a velocity of sound of 800 fms./sec.

REMARKS: Field work was plotted on 2 series of boat sheets at a

scale of 1:20,000 and combined on this smooth sheet; see Director's

letter 22/MEK, S-1-EX, dated 23 August 1955.

Descriptive Report

to accompany

Hydrographic Survey No. H-8240

(Field No. EX-2255 and EX-2655)

Little Tanaga Strait and Approaches

Project - 1218, 1955 Season

Scale 1:25,000

Surveyed by: S. B. Grenell, K. B. Jeffers, F. X. Popper, G. M. Haraden
and H. A. Garcia.

A. PROJECT

This survey was accomplished under authority contained in the Director's instructions for Project 1218 (formerly CS-218) dated 16 December 1954. ✓

B. SURVEY LIMITS AND DATES

This survey embraces the area along the north coast of Kagalaska and Little Tanaga Islands, all of Little Tanaga Strait (except the upper arm of Cabin Cove), Quail Bay, and the north and south approaches to Little Tanaga Strait. The survey was begun on 15 June 1955, and was completed on 14 September 1955. See chart # 9141. ✓

A junction was made with two contemporary surveys south of Little Tanaga Strait; (1) Survey No. H-8235 (EX-4355), 1:40,000 offshore sheet, and (2) H-8239 (EX-2555), 1:20,000 off the entrance to Quail Bay. ✓
(1955) (Junction with H-8307 (1956) South of Little Tanaga I. and North)

Junctions with prior surveys were made as follows:

1. H-7079, 1:10,000, 1945, North of Kagalaska Strait. ✓
2. H-8070, 1:10,000, 1953, North entrance to Kagalaska Strait. ✓
3. H-7605, 1:30,000, 1946, Sitkin Sound.
4. H-6918, 1:20,000, 1943, Sitkin Sound.
5. H-6920, 1:10,000, 1943, Cabin Cove.

This area was previously surveyed by the U. S. Navy in 1934 as shown, in part, on surveys No. H-6892 (1:30,000) and H-6893 and H-6894 (1:15,000).

C. SURVEY VESSEL AND EQUIPMENT

The south central part of Little Tanaga Strait was surveyed by the Ship EXPLORER using EDO and 808 graphic recorders. The remainder of the survey was accomplished by Explorer launches No. 1, 2, and 3, using 808 recorders and shoran equipment where possible. ✓

D. TIDE AND CURRENT STATIONS

A portable automatic tide gage was installed at Sand Bay, Great Sitkin Island, during the time hydrography was in progress in the north end of the Strait. Hydrography in Quail Bay was referred to the tide station at Elf Island (Boat Bay). The soundings south of latitude $51^{\circ} 50'$ (approximate) are referred to the tide station at Cemetery Point. The latter is the only tide station plotted on the sheet. *Cape Kingilak*
Only Cemetery T.G. falls on sheet

A self recording Roberts Radio Current buoy was anchored in the pass on the east side of Silak Island. Continuous records were obtained for a period of eight (8) days with very satisfactory results. No other current observations were made in this area.

E. SMOOTH SHEET

The smooth sheet projection was constructed by ships officers on a flat sheet, 42" x 60", and subsequently trimmed to 36" x 54". The shoran curves were drawn as soon as possible to avoid displacement thru distortion of the projection. The center for the Axle arcs was off the sheet and was located from computed points on distance arcs.

Field work was plotted on two series of boat sheets at a 1:20,000 scale, and bearing field numbers EX-2255 and EX-2655. EX-2255 covers the north coast of Kagalaska Island and Little Tanaga Strait north of latitude $51^{\circ} 50'$. EX-2655 covers the remainder of Little Tanaga Strait, the Southern Approach to the Strait and Quail Bay. Both surveys are combined on this smooth sheet which is plotted at a scale of 1:25,000 under authority contained in the Director's letter dated 23 August 1955, file 22/MEK, S-1-EX.

Shoreline and photo-hydro signals were transferred directly to the smooth sheet from blue-line advance shoreline manuscripts compiled in the Washington office and printed to scale. The transfer of shoreline and signals has been verified.

F. CONTROL STATIONS

Previously established triangulation control was recovered and used as follows:

TEL, REV, GUL, LITTLE TANAGA, and ICE, all established by U.S.N. in 1934.

GONEF and SHARP 1953--Pathfinder

WAR (USN) 1933

RF-2 1945

LALA 1946 (Signal used built over LALA RM No. 1)

Shoran stations AXLE and SAND were located by triangulation methods during the 1955 field season.

Photo-hydro stations were identified and pricked on nine-lens photographs. Final positions were determined by radial plot in the Washington office.

Names of photo-hydro stations MIG and PAD are reversed on manuscript T-11328.

Photo-hydro station POP is not on the manuscript and the only position available is the boat sheet position.

Note that position of photo-hydro station KUL is approximate (See T-11328).

G. SHORELINE AND TOPOGRAPHY

The shoreline, foreshore detail, and photo-hydro signals are derived from photogrammetric compilations based on field inspected nine-lens photographs. Advance shoreline manuscripts Nos. T-11327, 11328, and 11333 were furnished by the office as blue-line prints at a scale of 1:25,000 for direct transfer to the smooth sheet.

H. SOUNDINGS

Soundings obtained by the ship are scaled from continuous profiles recorded on 808 type fathometer supplemented where necessary by the EDO recorder. Bottom samples were obtained by snapper type samplers attached to a wire sounding machine.

All launch soundings are scaled from continuous profiles recorded by 808 type fathometers and supplemented by hand lead soundings.

Soundings are corrected for tide to MLLW, for draft of the transducer, variation of initial setting and phase in use where necessary.

I. CONTROL OF HYDROGRAPHY

Shoran distances from stations Axle and Sand were used on the northern part of the survey and as far south into the strait as possible. The arc from Sand was used to maintain position on some lines which are otherwise controlled by sextant fixes. This method was particularly useful when crossing the axis of the current flowing thru the strait.

Hydrography south of latitude $51^{\circ} 50'$ is controlled in part by shoran distances from GUL and TEL. All other hydrography is controlled by sextant fixes on photo-hydro signals.

Shoran controlled hydrography was plotted before the shoreline was transferred to the sheet. Along the southwest shoreline of Little Tanaga Island and to a lesser extent along the north shoreline, hydrography and shoreline are not in agreement. It is noted that shoran corrections on station GUL appear to be excessive and may be in error. Calibration fixes were taken within 1/2 mile of GUL which is unreliable. *Corrected in smooth plotting.*

Calibration of station ROCK on H-3238 using the same launch and shore equipment resulted in a shoran correction of -0.015 stat mile. It is thought this is a more nearly correct correction and it should result in better agreement between hydrography and shoreline.

J. ADEQUACY OF SURVEY

The survey is complete and adequate to supersede prior surveys for charting. The junctions with adjoining surveys are satisfactory and depth curves at junctions can be drawn adequately. There are no holidays or excessive differences at junctions.

K. CROSS LINES

Crosslines constitute approximately 8 percent of all lines run. Crossings are good with minor discrepancies in areas of very rough bottom and steep slopes.

L. COMPARISON WITH PRIOR SURVEYS

The only previous survey of Little Tanaga Strait was made by the U. S. Navy in 1934 as shown on H-6893. The bottom configuration is considerably changed by the new and more detailed survey. In addition there is an indicated shift of some features about 200 meters to the northwest. This survey should supersede the 1934 work for charting purposes. See the following paragraph.

M. COMPARISON WITH CHART

Chart No. 9141 (published April 1944, print date 29 September 1952, scale 1:30,000) is the largest scale chart of the area. The chart shows five sunken rock symbols in the vicinity of Silak Island, 2 northeast, 1 southwest, and 2 to the westward near the bare flat rock. No evidence of the existence of these rocks could be found and it is recommended that they be deleted. It is quite probable that the eddies, swirls and tide rips were mistakenly interpreted as showing the existence of submerged rocks. *Review TP 5*

A least depth of 1.7 fathoms was found on Rip Rock about ⁴⁰⁰~~250~~ meters northeast of the charted 8 fathom sounding. See pos. 34h (launch No. 3). *(vol. 12, p. 37)*

A 2.6 fathom sounding (pos. 54f, launch No. 1) was found in the area northwest of Silak Island near a charted 9 fathom sounding. No hand lead investigation was made. *(vol. 7, p. 42)*

The 7 fathom sounding 0.5 mile west of the point on the north side of Tana Bight was not verified in the charted location; however, a sounding of ~~5.6~~ fathoms was obtained 200 meters to the northward. See pos. 7j (launch No. 3). ^{7^e} *(vol. 6, p. 8)*

N. DANGERS AND SHOALS

Rip Rock had been previously identified, however a least depth of 1.7 fathoms was found by this survey in Latitude ^{51° 46' 78"} Longitude ^{176° 10' 65"} pos. 34h (launch No. 3). Several hand lead soundings were obtained. Moderate swells from the Pacific break on this shoal.

A fathometer sounding of ^{3^e}~~2.6~~ fathoms was found in Latitude ^{51° 49' 19"} Longitude ^{176° 15' 15"} (pos. 54f, launch No. 1). This sounding was not investigated.

O. COAST PILOT INFORMATION

See Notes for Revision of Coast Pilot No. 9 submitted in October 1955.

During the progress of field work the ship anchored at four places within the area covered by this survey;

- (1) Tana Bight, Latitude $51^{\circ} 51.1'$, Longitude $176^{\circ} 13.1'$, 25 fathoms, rocky bottom.
- (2) Cabin Cove, Lower Arm, Latitude $51^{\circ} 49.35'$, Longitude $176^{\circ} 18.05'$, 29 fathoms, sand and mud bottom.
- (3) Crater Cove (North of Ragged Point), Latitude $51^{\circ} 46.15'$, Longitude $176^{\circ} 17.1'$, 26 to 30 fathoms, gravel bottom.
- (4) Quail Bay, Latitude $51^{\circ} 45.05'$, Longitude $176^{\circ} 18.5'$, 21 fathoms, mud and sand bottom.

Anchorage 1, 3, and 4 are usable for temporary shelter only. The Cabin Cove anchorage is good in all weather except northeast. Strong local winds are occasionally experienced there due to down drafts from the surrounding hills.

Passage on the west side of Silak Island is possible but not recommended for any but small vessels. All large vessels using Little Tanaga Strait should use the passage east of Silak Island as laid down in the Coast Pilot. Very heavy tide rips occur in the Strait and usually are most noticeable in the area one mile south of Silak Island to two miles north of the island. Tidal currents which reach a maximum velocity in excess of five knots sweep thru the strait. Dense fogs are commonly encountered in this area during the summer months and transit of the strait at such times should not be attempted.

A small run of salmon was observed in Quail Bay in August.

P. AIDS TO NAVIGATION

There are no aids to navigation maintained in this area. There are no bridges, cables, or ferry routes.

Q. LANDMARKS FOR CHARTS

There are no landmarks other than natural objects in the area. See the special report previously submitted on this subject.

R. GEOGRAPHIC NAMES

See special report on Geographic Names previously submitted and list of geographic names attached to this report.

The name "CRATER COVE" has been suggested for the small cove north of Ragged Point. All other geographic names are taken from chart No. 9141.

Z. TABULATION OF APPLICABLE DATA

1. Submitted with this report.
 - (a) 1 smooth sheet H-8240, scale 1:25,000.

- (b) 5 boat sheets, scale 1:20,000.
- (c) 13 volumes of sounding records.
- (d) 6 envelopes of Fathograms.

2. Submitted separately.

- (a) Tide data for stations at Sand Bay, Cemetery Point, Elf Island, and Sweeper Cove.
- (b) Observations for current station No. 25, Little Tanaga Strait.
- (c) Magnetic observations at Silak Island, Station HEM.
- (d) Notes for Revision of Coast Pilot No. 9.
- (e) Special Report on Fathometer Corrections. ✓
- (f) Special Report on Shoran Corrections.
- (g) Special Report on Geographic Names.

Respectfully submitted,

Charles W. Clark

Charles W. Clark
Cmdr., USC&GS
for Karl B. Jeffers
Cmdr., USC&GS

Approved and forwarded:

George A. Nelson
George A. Nelson
Captain, USC&GS
C. O., EXPLORER

STATISTICS

For Hydrographic Survey H-8240(1955)

USC&GSS EXPLORER Project 1218

<u>Vol. No.</u>	<u>Day Ltr.</u>	<u>Date</u>	<u>No. Pos.</u>	<u>HL Wire Sdgs.</u>	<u>Sta. Miles Sdg. Line</u>
Launch #1					
1	a	6-17-55	67	0	15.4
1 & 2	b	6-21-55	129	1	32.2
2	c	6-23-55	118	2	33.0
2 & 3	d	6-24-55	132	1	27.9
7	e	8-18-55	137	0	28.9
7	f	8-23-55	165	0	28.7
7 & 8	g	8-24-55	160	0	29.9
8	h	8-27-55	151	0	28.5
8 & 9	j	8-28-55	123	0	19.1
TOTALS			1182	4	243.6
Launch #2					
4	a	6-15-55	23	0	2.6
4	b	6-17-55	101	0	18.6
4	c	6-21-55	68	0	11.2
TOTALS			192	0	32.4
Launch #3					
5	a	6-15-55	36	0	7.4
5	b	6-23-55	66	0	13.1
5 & 6	c	6-24-55	158	0	36.0
10	d	8-17-55	194	1	33.8
11	e	8-23-55	124	0	19.7
11	f	8-24-55	126	0	19.2
12	g	8-27-55	160	0	30.1
12	h	8-28-55	68	4	10.5
6	j	9-14-55	27	1	3.7
TOTALS			959	6	173.5
Ship					
13	A	8-23-55	181	0	57.6
13	B	8-24-55	84	10	27.6
TOTALS			265	10	85.2
GRAND TOTALS			2598	19	534.7

AREA: 50.8 Square Statute Miles.

TIDE NOTE TO ACCOMPANY

H-8240(1955) Field No. EX2.5/155

Four tide stations were used for the reduction of the soundings of this survey.

A portable gage at Cape Kiugilak, Sand Bay, Great Sitkin Island, was used for the reduction of soundings north of latitude $51^{\circ} 50'$. On 15 June the Sand Bay gage was inoperative and on 14 September the station had been discontinued. On these days the hourly heights at Sweeper Cove were furnished by the Washington Office and used in place of the Sand Bay tides. No correction for time or height was applied to either the Sand Bay or the Sweeper Cove tides.

A portable tide gage at Elf Island was used to reduce the soundings in Quail Bay on 17 August, d-day, Launch #3. No time or height corrections were applied.

The soundings on the remainder of the survey were reduced using the tides directly from a portable gage at Cemetery Pt., Kagalaska I.

The height of MLLW on the tide staff and the positions of the gages used are as follows:

Sweeper Cove	= $50^{\circ}-51.7'N$	= $176^{\circ}-38.4'W$
Adak Island	MLLW = 3.3' on tide staff.	
Cape Kiugilak, Sand Bay	= $52^{\circ}-00.1'N$	= $176^{\circ}-10.5'W$
Great Sitkin Island	MLLW = 3.6' on tide staff of 11 June	
	MLLW = 2.4' " " " " 18 June	
Cemetery Point, Kagalaska I.	= $51^{\circ}-49.2'N$	= $176^{\circ}-15.9'W$
	MLLW = 2.8' on tide staff 16.05	
Elf Island	= $51^{\circ}-42.8'N$	= $176^{\circ}-31.8'W$
	MLLW = 2.2' on tide staff	

GEOGRAPHIC NAMES

HYDROGRAPHIC SURVEY H-8240

Field No. EX-2.5/155

Little Tanaga Strait	
Quail Bay	
Crater Cove	New name
Piper Cove	
Cabin Cove	
Tana Bight	
Oglala Point	
Cape Lises	
Tana Point	
Silak Island	
Cemetery Point	
Chaika Rock	
Rip Rock	
Cape Chisak	
Ragged Point	

LIST OF SIGNALS

Hydrographic Survey H-8240

Field No. EX-2.5/155

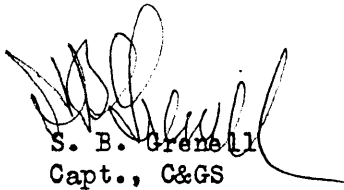
<u>NAME</u>	<u>SOURCE</u>	<u>NAME</u>	<u>SOURCE</u>
AGE	T-11328	JOE	T-11328
ALE	T-11328	JUG	T-11328
ALL	Vol. 5 page 322	KIM	T-11328
AMY	T-11332	KIT	T-11328
ASH	T-11328	KUL	T-11328
AZO	T-11328	LALA	LALA 1946 R.M. 1
BAG	T-11328	LEX	T-11328
BAR	T-11328	LITTLE TANAGA	(USN)1934
BLU	T-11328	LYE	T-11328
BOO	T-11328	MAR	T-11328
BOY	T-11328	MIG	T-11328 (PAD)
BUS	T-11328	MUM	T-11328
CAM	T-11328	NOG	T-11328
CAN	T-11328	NOW	T-11328
COM	T-11328	NUT	T-11328
CRY	T-11328	OAK	T-11328
DIG	T-11328	OUT	T-11328
DIF	T-11328	PAD	T-11328(MIG)
DIN	T-11328	PEW	T-11328
DRY	T-11333	PIT	T-11328
DYE	DYE(USN)1934	PLY	T-11333
ELK	T-11333	POP	T-11328 Boat Sheet ✓
END	T-11328	RAG	T-11328
EVA	T-11328	REM	REM(USN)1934
EVE	T-11328	RUE	T-11328
FAT	T-11328	RUM	T-11328
FIR	T-11328	RUN	T-11333
FOE	T-11333	SHARP	SHARP 1953
FOUL	FOUL 1953	SIS	T-11328
FUN	T-11328	SKI	T-11333
GAF	T-11328	SOB	T-11328
GAT	T-11328	TEL	TEL(USN)1934
GIB	T-11333	TIC	T-11328
GONEF	GONEF 1953	TIM	T-11328
GUL	GUL(USN)1934	TOT	T-11333
GUS	T-11328	TRY	T-11333
HAW	T-11328	TUB	T-11328
HEX	T-11328	UNA	T-11328
HOG	T-11328	VAL	T-11328
HUT	T-11328	VIA	T-11328
ICE	ICE(USN)1934	WAC	T-11328
ILL	T-11328	WOE	T-11328
ITS	T-11328	YUK	T-11328
IVY	T-11328	ZAM	T-11328
JIG	T-11328	ZOO	T-11328
JOB	T-11328		

Approval Sheet

H-8240 (EX-2.5/155)

The ship hydrography on this survey was accomplished under my direct supervision. The launch work was inspected daily. All field records have been examined and are approved. No additional field work is required.

The smooth sheet is only partially plotted at this time and is subject to review by my relief.



S. B. Grenell
Capt., C&GS
Commanding Ship EXPLORER

Little Tanaga Strait and Approaches

SMOOTH SHEET

The completely constructed smooth sheet was received from the ship with all the projection, shoran curves, triangulation and photo-hydro signals plotted on it. The shoreline was complete except for the inking in of the SE shore of Little Tanaga Island from TANA PT south to Cape Chisak.

CONTROL STATIONS

The boat sheet location of photo-hydro signal POP was presumably obtained from 5 sextant cuts recorded in Vol. 5, pgs. 22-23. The triangle of error was quite large. The plotting on the boat sheet was resected to find out which apex of this triangle was used for plotting. This intersection did not prove out and on the advice of one of the field officers, the mean point of 4 of the cuts was used. This gave the final accepted location of the signal which on the boat sheet is in red and on the smooth sheet is in blue. The junctions with other launches work to the south and shoreline positions confirmed the selection.

SHORELINE AND TOPOGRAPHY

The location of two rocks shown on T-11327, in the vicinity of Lat. $51^{\circ} 52'$, Long. $176^{\circ} 21'$ are questioned. They are quite close together and deep water is shown on the fathometer as the launch passed between them. No remark of them was made in the sounding record. Because of a grazing line from AXLE the shoran returns from AXLE in this area were rejected and the lines plotted by time, course and shoreline.

*Rocks not
disproved
and were
retained
from T-11327*

CONTROL OF HYDROGRAPHY

It was necessary to apply an arbitrary correction to both the shoran readings from GUL and TEL. The positions already smooth plotted by the ship did not agree with the shoreline on the manuscript. An agreement of the soundings at the junction between the ship hydrography and that of the launch involved was found. This was applied to the shoreline ends of the sounding lines and an extra adjustment was applied in grazing areas to bring the hydrography and the shoreline into agreement.

DANGERS AND SHOALS

Soundings on the smooth sheet, at the charted position of Rip Rock, show approximately 28 fms. of water. The fathograms have been inspected and no indication of a shoal is to be found. It seems likely that the charted location should move NE to the smooth sheet position of the 1.7 fm. sounding.

Respectfully submitted,

Harvey C. Parsons

HARVEY C. PARSONS
Cartographer, C&GS

EXAMINED AND APPROVED

William M. Martin

WILLIAM M. MARTIN
Supervisory Cartographer, C&GS

APPROVED AND FORWARDED

Curtis Le Fever

CURTIS LE FEVER, CAPT., C&GS
Seattle District Officer

GEOGRAPHIC NAMES

Survey No. H-8240

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
<u>Alaska</u>		(title)									1
<u>Aleutian Islands</u>		"									2
<u>Andreanof Islands</u>		"									3
<u>Pacific Ocean</u>		(recommended for general locality)									4
<u>Little Tanaga Island</u>									BGN		5
<u>Little Tanaga Strait</u>									"		6
<u>Kagalaska Island</u>									"		7
<u>Cape Chisak</u>									"		8
<u>Rip Rock</u>									"		9
<u>Piper Cove</u>									"		10
<u>Silak Island</u>									"		11
<u>Tana Point</u>									"		12
<u>Tana Bight</u>									"		13
<u>Cape Lises</u>		(not Lises)							"		14
<u>Oglala Point</u>									"		15
<u>Upper Arm</u>									"		16
<u>Cabin Cove</u>									"		17
<u>Lower Arm</u>									"		18
<u>Cemetery Point</u>									"		19
<u>Chaika Rock</u>									"		20
<u>Crater Cove</u>											21
<u>Ragged Point</u>									BGN		22
<u>Quail Bay</u>									"		23
<u>Sharp Cape</u>									"		24
Tide Stations off sheet:											25
<u>Sweeper Cove (Adak Island)</u>											26
<u>Elf Island, Boot Bay</u>											27
<u>Sand Bay, Cape Kingiak, Great Sitkin Island.</u>											27

Names Approved 6-7-57

L. HECK

(All names except No. 21 on charts 9141 or

9193)

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens:

19 June 1957

Plane of reference approved in
13 volumes of sounding records for

HYDROGRAPHIC SHEET 8240

Locality Aleutian Islands

Chief of Party: S. B. Grenell in 1955

Plane of reference is mean lower low water, reading

3.6 ft. on tide staff ~~at~~ (6/11/55) at Cape Kiugilak

2.4 ft. ~~below B.M. 2~~ on tide staff (6/18/55) at Cape Kiugilak

8.2 ft. below B. M. 2 (1955)

2.8 ft. on tide staff at Cemetery Point

3.9 ft. below B.M. 1 (1955)

2.2 ft. on tide staff at Elf Island

6.4 ft. below B.M. 1 (1955)

~~Condition of records satisfactory except as noted below~~

Height of mean high water above plane of reference is as follows:

Cape Kiugilak	=	3.7 feet
Cemetery Point	=	3.4 feet
Elf Island	=	3.6 feet


Signature

Chief, Tides Branch

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ..8240..

Records accompanying survey:

Boat sheets ..5..; sounding vols. .13..; wire drag vols.; bomb vols.; graphic recorder rolls .6-~~5~~ Envelopes special reports, etc. .1-Smooth sheet and 1-Descriptive report;

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

Number of positions on sheet	.....	2598
Number of positions checked	.....	31
Number of positions revised	.....	2 ^{53 62 65 } beams}
Number of soundings revised (refers to depth only)	.....	9 { in order to smooth curves
Number of soundings erroneously spaced	.....	0
Number of signals erroneously plotted or transferred	.....	0
Topographic details	Time	..... 5 hrs.
Junctions	Time	..... 32 hrs. (nine junctions inked)
Verification of soundings from graphic record	Time	..... 3 hrs.

Verification by A. Rose Total time 234 hrs. Date 6-11-'58

Reviewed by [Signature] Time 58 Date 8/20/58

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8240

FIELD NO. EX-2655

Alaska, Aleutian Islands, Little Tanaga Strait and Approaches

Surveyed June-September, 1955

Scale 1:25,000

Project No. 1218

Soundings:

808 and EDO depth recorders

Control:

Shoran
Sextant angles on
shore signals

Chief of Party - S. B. Grenell

Surveyed by - S. B. Grenell, K. B. Jeffers, F. X. Popper,
G. E. Haraden and H. A. Garcia

Protracted by - G. E. Haraden and H. C. Parsons

Soundings plotted by - G. E. Haraden and H. C. Parsons

Verified and inked by - S. Rose

Reviewed by - L. V. Evans III

Date: 8/20/58

Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with reviewed photogrammetric surveys T-11327 (1953-55), T-11328 (1953-56) and unreviewed survey T-11333 (1953-55).

The sources of control are given in the Descriptive Report.

2. Sounding Line Crossings

Depths are in adequate agreement at sounding line crossings.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately defined.

The bottom is generally rock and quite irregular.

4. Junctions with Contemporary Surveys

Satisfactory junctions were effected with the following contemporary surveys:

H-7605 (1946) to the north
 H-6918 (1943-56) to the northeast
 H-8235 (1955) to the south
 H-8239 (1955) to the southwest
 H-7079 (1945-55) to the northwest
 H-8070 (1953) to the northwest
 H-6920 (1943) in the Upper Arm of Cabin Cove

The junction with H-8307 (1956) to the east will be considered in the review of that survey.

5. Comparison with Prior Surveys

H-6892 (1934) 1:30,000	H-6895 (1934) 1:15,000
H-6893 (1934) 1:15,000	H-6889 (1933) 1:15,000
H-6894 (1934) 1:15,000	H-6898 (1934) 1:60,000
	H-6919 (1943) 1:20,000

These prior surveys comprise the previous coverage of the area of the present survey. A comparison between the prior and present surveys shows broad, general agreement, but the more intensive development by fathometer on the present survey reveals the bottom configuration in more detail. Numerous differences in the positions of features are attributed to the relatively weak control of the prior surveys as compared to the present survey.

Attention is called to the following items, all originating with H-6893, exemplifying the differences between the present and prior surveys:

- (1) The 8-fm. sounding (charted) at Rip Rock in lat. $51^{\circ}46.61'$, long. $176^{\circ}10.87'$ is out of position. Development of the present survey places this feature about 400m. northeast of the prior position, with a least depth of 1.7 fms.
- (2) The 5 sunken rock symbols (charted) in (a) lat. $51^{\circ}48.97'$, long. $176^{\circ}14.28'$, (b) lat. $51^{\circ}48.75'$, long. $176^{\circ}14.72'$ and (c) lat. $51^{\circ}48.82'$, long. $176^{\circ}15.18'$ should be disregarded. Those rocks have been disproved or adequately developed by the hydrography and investigation of the present survey and the symbols should be replaced by actual depths.
- (3) The following charted soundings, discredited in their positions on H-6893 by the present hydrography, are considered

out of position and should be disregarded:

Prior Depth	Lat.	Long.	Present Depth
10 fms.	51°49.72'	176°16.75'	16-18 fms.
10 "	51°48.32'	176°11.2'	17 "
2 "	51°52.2'	176°23.8'	6 $\frac{1}{2}$ "
17 "	51°52.32'	176°23.79'	25-28 "

- (4) The 15-fm. sounding (charted) in lat. 51°48.14', long. 176°12.67' is discredited by intensive development on the present survey with least depth of 18 fms. and should be disregarded.
- (5) The 23-fm. sounding (charted) in lat. 51°47.83', long. 176°15.6' is discredited by 43-fm. depths on the present survey. The 23 was apparently an error on the prior survey and should be disregarded.

With the addition of a number of bottom characteristics carried forward from H-6892 and H-6893 the present survey is adequate to supersede the prior surveys within their common areas.

6. Comparison with Chart 9141 (print date 9/29/52)

A. Hydrography

Except for several hand corrections charted from the boat sheets of the present survey the charted hydrography originated entirely with the prior surveys previously discussed, which need no further comment.

Attention is called to the following soundings, charted as hand corrections from the boat sheets, which have been revised on the final smooth sheet:

- (1) The 5-fm. sounding in lat. 51°52.34', long. 176°19.32' should be deleted from the chart. Office scanning and smooth plotting place this depth about 200m. south-southeast in comparable general depths.
- (2) The 2-fm. sounding in lat. 51°49.23', long. 176°15.17' has been revised to 3.9 fms.

The present survey entirely supersedes the charted hydrography within its limits.

B. Aids to Navigation

There are no charted aids to navigation within the area of this survey.

7. Condition of Survey

A. The field records are complete and comprehensive.

B. The smooth plotting was well done.

8. Compliance with Project Instructions

This survey adequately complies with the project instructions.

9. Additional Field Work Recommended

This is a good basic survey of the area covered and no additional field work is recommended.

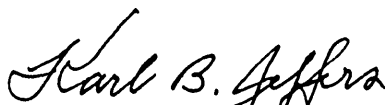
Examined and approved:



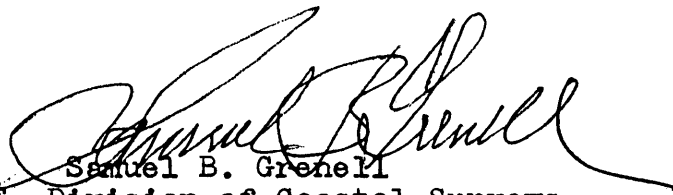
Max G. Ricketts
Chief, Nautical Chart Branch



Ernest B. Lewey
Chief, Division of Charts



Karl B. Jeffers
Chief, Hydrography Branch



Samuel B. Grenell
Chief, Division of Coastal Surveys

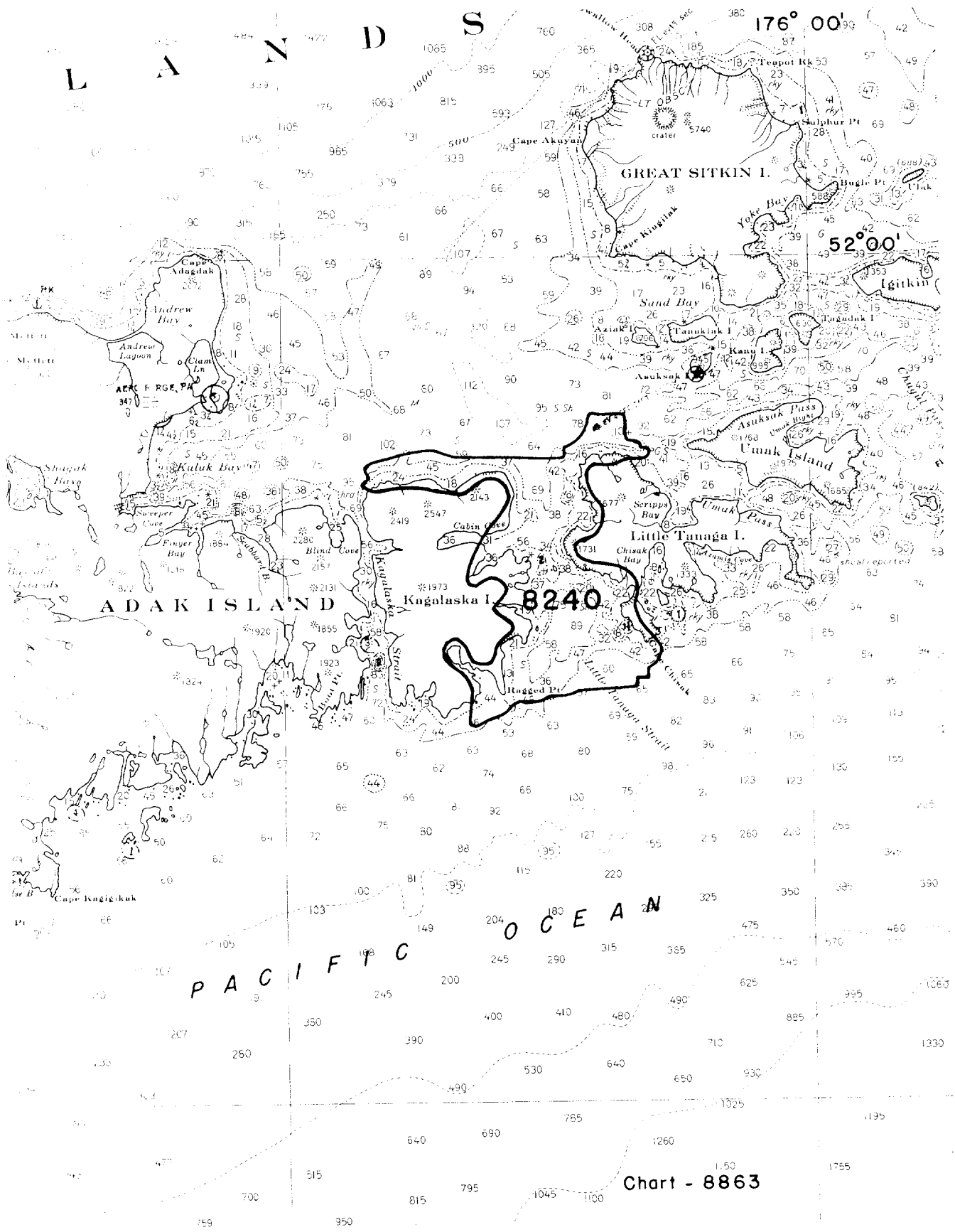


Chart - 8863

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8240 / 1955

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
6/25/58	9141	<i>WE</i>	Before After Verification and Review <i>Partial applic'n</i>
6-26-58	8863	<i>Wittmann</i>	Before After Verification and Review <i>Part applic'n</i> <i>After Review - fully applied - JFW 11/24/58</i>
8-1-58	9141	<i>R.K. Redmond</i>	Before After Verification and Review. <i>Partial appn</i> ^{JFW}
4/15/59	9139	<i>Chelmer</i>	Before After Verification and Review <i>Partial</i>
4/28/59	9193	<i>Chelmer</i>	Before After Verification and Review <i>Partial</i>
5/18/60	9141	<i>W. Cornish</i>	Before After Verification and Review <i>- consider as final application until reconstruct.</i> ^{JFW}
3-10-'61	9102	<i>J.M. Albert</i>	Before After Verification and Review <i>Revise 2 sdgs</i>
5-23-61	9140	<i>R.E. Elkins</i>	Before After Verification and Review <i>Partly applied thru chart 9141 dig 7 & H-8240.</i>
1-18-66	9139	<i>Embrey</i>	Before After Verification and Review <i>Partly applied to be considered as final application until chart is reconstructed</i>
2/14/66	9193	<i>J.R. Weir</i>	Before After Verification and Review <i>Thru Ch. 9141 dig #7 and Ch. 9140 dig #5, consider fully applied until reconstruction.</i>

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.