

8239

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-2555 Office No. H-8239

LOCALITY

State Alaska - Aleutian Islands

General locality South Coast of Adak and
Kagalaska Islands

Locality Crone Island to Quail Bay

19~~4~~ 55

CHIEF OF PARTY

S. B. Grenell

LIBRARY & ARCHIVES

DATE April 10, 1956

8239

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-8239

Field No. EX-2555

State Alaska, Aleutian Islands

General locality South Coast of Adak and Kagalaska Islands

Locality Crone Island to Quail Bay

Scale 1:20000 Date of survey Aug. 4-27, 1955

Instructions dated 16 December 1954

Vessel Explorer

Chief of party S. B. Grenell

Surveyed by S. B. Grenell, K.B. Jeffers, E.F. Hicks, F.X. Popper, G.E. Haraden,
and S. L. Hollis.

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

Soundings penciled by G. E. Haraden

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

REMARKS: _____

JNS

Descriptive Report to Accompany
Hydrographic Survey H-8239
Field No. EX-2555
Crone Island to Quail Bay
Project 1218 - Season 1955
Scale 1:20,000

Surveyed by: S.B. Grenell, K.B. Jeffers, E.F. Hicks, F.X. Popper,
S.L. Hollis, and G.E. Haraden.

A. PROJECT:

This survey was accomplished in accordance with the Director's instructions dated 16 December 1954, Project - 1218 (formerly CS-218).

B. SURVEY LIMITS AND DATES:

This survey covers the inshore area along the south coast of Adak and Kagalaska Islands and between Crone Island and Quail Bay. Junctions were made with contemporary surveys as follows:

1955 { H-8238, 1:20,000, western limit off Crone Island. ✓
H-8240, 1:25,000, eastern limit off Quail Bay. ✓
H-8234, 1:40,000, at southwest corner. ✓
H-8235, 1:40,000, south and southeast limits. ✓

A junction was made with H-8071, 1:10,000 scale survey by the ✓
PATHFINDER in 1953 at the south entrance to Kagalaska Strait.

The offshore part of this sheet south of Kagalaska Island was
covered by a Navy reconnaissance survey in 1934 at a scale of 1:60,000. ✓
H-6899

The survey was made between 4 and 27 August 1955.

C. SURVEY VESSEL AND EQUIPMENT:

The offshore portion of this survey was accomplished by the Ship
EXPLORER using EDO and 808 graphic recorders and shoran control. ✓
Bottom samples were obtained with snapper type cups on a wire sounding
machine. * No Edo profiles submitted with H-8239.

The inshore areas were surveyed by EXPLORER launches No. 1, 2 and
3 using 808 graphic recorders supplemented by hand lead soundings. All
launch hydrography is controlled by sextant fixes on photo-hydro signals. ✓

D. TIDE AND CURRENT STATIONS:

A portable automatic tide gage was installed at Elf Island and
operated during the period of this survey except as shown on the
attached tide note. Soundings obtained on 24 and 27 August are referred
to the standard tide station at Sweeper Cove--all other soundings are
referred to MLLW as recorded at the Elf Island tide station. A Roberts

recording current buoy was established in 67 fathoms at current station No. 14, position 18B (ship), Latitude 51-38.15, Longitude 176-34.6. The record obtained by the buoy was supplemented by monitored recordings aboard ship. See Special Report on Current Observations — 1955, submitted with the current records. ✓

A current station in Kagalaska Strait was also occupied with excellent results. *Not shown on H-8239 or H-8071. Location not recorded in sounding volumes.*

E. SMOOTH SHEET:

The smooth sheet projection was constructed by hand on a flat sheet 42" x 60" and then cut to 36" x 54". Shoran arcs were drawn as soon as the projection was checked. ✓

Shoreline and photo-hydro signals were transferred by burnishing blue line prints of advance manuscripts T-11331, T-11332, 11333, and T-11326. ✓ These manuscripts were compiled from nine-lens photographs which were inspected in the field by this command.

of 1953-54

The transfer of shoreline and signals has been verified in accordance with Section 757 of the hydro manual. ✓

F. CONTROL STATIONS:

Triangulation control was used as follows: HID, BOOT, DAK and EASY, — U.S. Engineers, 1943; ABLE, MUNZI and SHARP, PATHFINDER, 1953; ✓ SPUD, 1945; FANG, 1955.

Photo-hydro signals were pricked on 9-lens photographs in the field. Final positions were determined by radial plot in the Washington Office as shown on advance manuscripts T-11326, and T-11331 thru T-11333. ✓

DAK

Shoran station ELF was located by a short traverse from (USE) 1943. Shoran stations FANG and SPUD were erected at triangulation stations of the same name.

Three signals, (RAD, STY, and INK) were originally located by sextant fixes on previously identified photo points. Signal INK was located in the photo-plot and is identified by a red circle. When fixes at signals RAD and STY were plotted it was apparent that one or more of the photo-hydro signals was incorrectly plotted. After considerable investigation the position of signal GIG was shifted approximately 30 meters north. This is in close agreement with boat sheet position, results in a more reasonable plot of signals RAD and STY and agrees with the photo-location of signal INK. See page 3, Volume 2 of the sounding records. *Hydro. development on smooth sheet satisfactory when these stations were used.*

Smooth plot of hydrography in Boot Bay indicates that there is considerable doubt as to the correctness of signal positions in this area. This is probably due to the uncertainty in the location of the hydrographic Hydrographic development in Boot Bay satisfactory after few minor adjustments in fixes were made.

signals RAD and STY. The shifts amount to a maximum of approximately 30 meters in longitude. A re-examination of the photographs and photo-plot is indicated.

Photo-hydro station YEL was found to be in error on the advance manuscript causing jumps in the sounding lines. The position of the station as per boat sheet was transferred and used on the smooth sheet. *Smooth sheet position of YEL satisfactory.*

From position 48b to 62b (Launch No. 2) the sounding lines in the small bight at Latitude 51-39.5, Longitude 176-39 were plotted from the boat sheet where station SAM was involved. Signal SAM appears to have shifted slightly from boat sheet position. This shift, coupled with the fact that many of the fixes in the area were necessarily weak, causes erratic jumps in the sounding lines. See note in Vol. 6, page 37 of sounding records. *Smooth sheet plotted sdg. lines satisfactory.*

G. SHORELINE AND TOPOGRAPHY:

The shoreline and foreshore detail are taken from *reviewed* advance manuscripts T-11326, T-11331, T-11332, and T-11333⁷⁵⁻³⁹ furnished by the Washington Office. The shoreline is rocky and very irregular. Most inshore area is fringed by kelp and rocks which prevented the delineation of the low water line and the one fathom curve.

H. SOUNDINGS:

Soundings by the ship were scaled from continuous profiles recorded on 808 type fathometers supplemented where necessary by EDO fathometer No. 4. Bottom samples were obtained with the wire sounding machine and *Not submitted with H-8239* snapper cup sampler. *Profiles*

Launch soundings were obtained from 808 graphic recorders supplemented by hand lead soundings in critical areas.

All soundings have been check-scanned by ship's officers and corrected for tide, variation from initial setting, draft, and phase where necessary. See Special Report on Fathometer Corrections.

I. CONTROL OF HYDROGRAPHY:

The offshore ship hydrography is controlled by shoran distances from FANG, ELF and SPUD. A few lines parallel to the shore are controlled by sextant fixes on photo-hydro signals. All launch hydrography is controlled by visual fixes on shore signals.

Shoran stations FANG and SPUD were manned for short periods as required. Station ELF was manned continuously while work was in progress on the south side of the chain. See Special Reports on Shoran Corrections, Use of Portable Shoran Shacks, and Construction and Use of a Drum Buggy.

J. ADEQUACY OF SURVEY:

This is the first complete basic survey to be made of this area. Only a few reconnaissance soundings have been obtained previously. Adequate junctions were made with contemporary surveys to the east, south and west. A junction was also made with the 1953 ^(H-8071) survey at the south end of Kagalaska Strait. Depth curves at the junctions with these surveys can be adequately drawn. There are no holidays and no additional work is required. This survey should supersede all previous hydrographic surveys of the area.

K. CROSSLINES:

The crosslines constitute approximately 10.6% of all lines run. In general the crossings are excellent. A few discrepancies of 2 to 3 fathoms occur on the steep slopes inshore and are not in excess of what ^{depths at crossings in adequate agree- ment.} could be expected in such areas.

L. COMPARISON WITH PRIOR SURVEYS:

No prior survey has been made of this area.

M. COMPARISON WITH CHARTS:

A few soundings are shown on chart No. 9141 east of Kagalaska Strait, and a few offshore soundings are shown on chart No. 9193. The 1934 reconnaissance survey is the source of all such soundings. There are no critical soundings on the old survey. Information charted in this area should be recompiled from the new data. See paragraph "N" of this report for further comparison with charts. P6 Review

N. DANGERS AND SHOALS:

Two sunken rock symbols are shown on charts No. 9141 and 9193 on the west side of the southern approach to Kagalaska Strait, viz.: Latitude 51-44.24, Longitude 176-25.77 and Latitude 51-43.87, Longitude 176-25.81. No indication of either rock was found and both should be deleted. Investigate on H-8071
See pp 2, p 95, H-8071 and L 562 (1956)

There are a number of sunken rock and rock awash symbols charted in Boot Bay which appear to be charted for the purpose of indicating foul areas without regard to actual location of such features. These symbols should be deleted and only those rocks shown which appear on the shore-line manuscripts or the smooth sheet.

The following newly found dangers should be charted:

- (1) Latitude 51-41.00, Longitude 176-36.97 ^{at MHW} - Rock awash, Chart 9193.
- (2) Latitude 51-44.12, Longitude 176-26.23 - Rock awash, Chart 9141 & 9193. (2) J

O. COAST PILOT INFORMATION:

See special report on "Notes for Revision of Coast Pilot No. 9" submitted in October 1955.

The coast line of Adak and Kagalaska Islands included in this survey is extremely broken and irregular and fringed in many places by rocks and kelp. There are no good anchorages for large vessels along this coast. Such vessels will find some shelter in Boot Bay except in southerly weather. To enter Boot Bay from a position 1.1 miles 220° from Boot Point make good a course of 000° with a small islet at the entrance to the bay on the port bow. When the south tangent of the islet bears 270° change course to 329° and proceed about 0.5 miles and the south end of a small island comes abeam to starboard. Then change course to 357° for 0.7 mile and turn to a west course to anchorage in desired depth, 20 to 30 fathoms. Small shallow draft vessels may enter the bay through the narrow channel west of Elf Island. *depths off Sig 160 are unknown. Lat $51^{\circ}44'$ Long $176^{\circ}31.4'$*

*Sig
Pie
plots
okan.
entrances
depths
off Pie
are 40 fms*

There is a strong tidal current through Kagalaska Strait and tide rips dangerous to small boats occur in the strait when wind and current oppose each other. From observations at current station number 14, it appears that the current off shore flows in a westerly direction parallel with the general trend of the coast and has a maximum velocity of about 1.0 knot.

P. AIDS TO NAVIGATION:

There are no aids to navigation in this area.

Q. LANDMARKS FOR CHARTS:

There are no landmarks other than peaks and small islands in this area. See special report on landmarks for charts, previously submitted.

R. GEOGRAPHIC NAMES:

See special report on geographic names, previously submitted and attached names list.

New names have been recommended for three features, viz.:

- (1) CRONE ISLAND - The largest of a group of small islands at the western limit of the sheet.
- (2) CAMEL BAY - The partially blocked bay north of Crone Island and the first bay east of Hidden Bay.
- (3) ELF ISLAND - The largest island on the southwest side of Boot Bay.

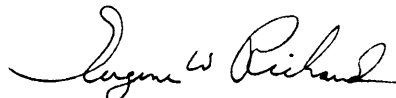
All names are suggested by the shape of the feature to which each is applied.

Z. TABULATION OF APPLICABLE DATA.

- (1) Submitted with this report:
 - (a) 1 smooth sheet ✓
 - (b) 3 boat sheets ✓
 - (c) 9 volumes of sounding records ✓
 - (d) 4 envelopes of fathograms ✓
 - (e) 3 tracings of junctions X

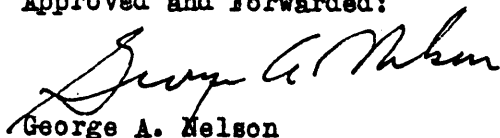
- (2) Submitted separately:
 - (a) Special Report on Fathometer Corrections #141
 - (b) Special Report on Shoran Corrections #142
 - (c) Special Report on Geographic Names -
 - (d) Notes for revision of Coast Pilot No. 9 -
 - (e) Tide Records for Elf Island -
 - (f) Records for Current Station No. 14 -
 - (g) Special Report on Portable Shoran Shacks -
 - (h) Special Report on Drum Buggy -
 - (i) Magnetic Observations at Elf Island, Sta. DAK ✓

Respectfully submitted,



Eugene W. Richards
Lieutenant, C&GS

Approved and Forwarded:



George A. Nelson
Captain, C&GS
Commanding Ship EXPLORER

Field No. 2555
H-8239

<u>Vol. No.</u>	<u>Day Ltr.</u>	<u>Date</u>	<u>No. Pos.</u>	<u>Wire Sdgs.</u>	<u>Sta. Miles Sdg. Line</u>
1(Ship)	A	8-4-55	66	0	31.3
1 "	B	8-5-55	40	7	14.9
1 & 2 "	C	8-8-55	113	0	80.7
2 "	D	8-10-55	65	0	23.0
2 "	E	8-11-55	109	12	62.4
2 "	F	8-16-55	34	0	11.7
2 "	G	8-24-55	4	4	0.0
2 "	H	8-27-55	13	13	0.0
3(Lch. 1)	a	8-8-55	166	0	30.2
3 & 4 "	b	8-11-55	225	0	40.0
4 "	c	8-12-55	221	2	30.9
4 "	d	8-16-55	147	0	19.9
5 "	e	8-19-55	116	1	15.3
6(Lch. 2)	a	8-5-55	108	0	21.3
6 "	b	8-11-55	187	0	26.4
6 & 7 "	c	8-12-55	137	0	28.6
7 "	d	8-19-55	108	0	18.3
7 "	e	8-27-55	97	1	14.8
8(Lch. 3)	a	8-5-55	113	3	19.5
8 & 9 "	b	8-16-55	109	0	20.8
9 "	c	8-19-55	50	0	8.4
TOTALS			2228	43	518.4

AREA SURVEYED: 86.0 Square Statute Miles.

TIDE NOTE TO ACCOMPANY

H-8239(1955) Field No. EX-2555

Soundings on G and H days, and e day, Launch #2 were referred to the standard tide gage at Sweeper Cove, Adak Island. A time correction of -2^h-00^m and a range factor of 1.0 were applied to the observed tides.

All other soundings were reduced for tide, using the observed values directly from a portable tide gage at Elf Island.

Position of Sweeper Cove tide gage Lat. $50^{\circ} - 51.7'N$
Long. $176^{\circ} - 38.4'W$
MLLW = 3.3 feet on tide staff at Sweeper Cove.

Position of Elf Island tide gage Lat. $51^{\circ} - 42.8'N$ ✓
Long. $176^{\circ} - 31.8'W$
MLLW = 2.2 feet on tide staff at Elf Island.

GEOGRAPHIC NAMES

HYDROGRAPHIC SURVEY H-8239

Field No. EX-2555

Crone Island	New name
Camel Bay	" "
Elf Island	" "
Boot Bay	
Boot Point	
Kaga Point	
Kagalaska Strait	
Sharp Cape	
Quail Bay	
Ragged Point	
Adak Island	
Kagalaska Island	

LIST OF SIGNALS

Survey No. H-8239

Field No. EX-2555

<u>NAME</u>	<u>SOURCE</u>	<u>NAME</u>	<u>SOURCE</u>
ABLE	Able 1953	FIT	T-11331
ACT	T-11332	FLO	T-11331
AID	T-11331	FLY	T-11331
AMP	T-11327	FOE	T-11333
AMY	T-11332	FUR	T-11332
ANN	T-11331		
AUK	T-11331	GAS	T-11331
AVE	T-11331	GEE	T-11331
		GEL	T-11332
BAY	T-11331	GET	T-11331
BEL	T-11331	GIB	T-11333
BES	T-11331	GIG	T-11332
BIB	T-11331	GOB	T-11332
BIZ	T-11331	GUM	T-11331
BOOT	Boot (USE) 1943	GUY	T-11331
BUY	T-11332	GYP	T-11331
BID	T-11332		
CAW	T-11331	HAR	T-11332
COG	T-11331	HEN	T-11331
COY	T-11331	HEP	T-11331
CUL	T-11332	HER	T-11331
CUR	T-11332	HEX	T-11332
		HID	Hid(USE) 1943
DAD	T-11331	HIP	T-11331
DAK	Dak (USE) 1943	HIS	T-11332
DAW	T-11332	HOE	T-11331
DEN	T-11331	HUG	T-11331
DEW	T-11332		
DIX	T-11331	IDE	T-11331
DON	T-11332	IKE	T-11332
DOW	T-11331	IKY	T-11331
		IMP	T-11331
EAR	T-11331	INK	Vol 2 page 3
EASY	Easy (USE) 1943	ION	T-11332
EBA	T-11332	IZO	T-11331
EGG	T-11331		
ELF	Descriptive Report H-8234	JAB	T-11331
ELM	T-11332	JAG	T-11331
EON	T-11332	JAM	T-11331
ERG	T-11331	JAR	T-11332
EWE	T-11331	JAX	T-11332
FANG	Fang 1955	JAZ	T-11331
FEB	T-11331	JED	T-11331
FIB	T-11331	JEN	T-11331
FIE	T-11332	KAM	T-11331
FIG	T-11332		

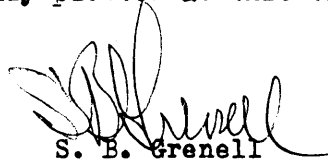
KAY	T-11331	PUT	T-11332
KEN	T-11332		
KIL	T-11331	QUO	T-11331
KIM	T-11332		
KIS	T-11331	RAD	Vol. 2, page 3
KOF	T-11331	RAP	T-11331
KUM	T-11331	RAW	T-11331
		RIB	T-11331
LAF	T-11331	RIM	T-11331
LAW	T-11331	RUG	T-11331
LED	T-11331	RYE	T-11332
LEW	T-11331		
LIP	T-11331	SAL	T-11331
LIT	T-11332	SAM	T-11331
LOC	T-11332	SAT	T-11331
LUM	T-11331	SAX	T-11331
		SEE	T-11331
MAC	T-11331	SHARP	Sharp, 1953
MAL	T-11332	SIN	T-11332
MAN	T-11331	SKI	T-11333
MAO	T-11331	SPUD	Spud, 1945
MAY	T-11331	STY	Vol. 2, page 3
MID	T-11331		
MIT	T-11331	TAD	T-11332
MIX	T-11331	TAG	T-11331
MOE	T-11332	TAP	T-11331
MUNZI	Munzi, 1953	TEA	T-11331
		THY	T-11331
NAP	T-11331	TON	T-11331
NEK	T-11331	TOT	T-11333
NIB	T-11332	TRY	T-11333
NIK	T-11331		
NIX	T-11331	UGO	T-11331
NOD	T-11331	URN	T-11331
NOR	T-11331		
NOT	T-11331	VIE	T-11333
NUL	T-11331	VIM	T-11331
		VIP	T-11331
OAF	T-11331	VON	T-11331
OBI	T-11331	VOW	T-11332
ODE	T-11331		
ORA	T-11332	WAG	T-11332
ORG	T-11331	WAY	T-11331
OWE	T-11331	WEE	T-11331
OWL	T-11331	WET	T-11331
		WHO	T-11331
PAB	T-11331		
PAM	T-11331	YAM	T-11331
PAT	T-11331	YEL	T-11332
PEA	T-11331	YIP	T-11331
PEG	T-11331	YOU	T-11331
PEP	T-11331		
POW	T-11331	ZAC	T-11331
		ZIP	T-11331

Approval Sheet

H-8239 (EX-2555)

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

GEOGRAPHIC NAMES

Survey No. H-2239

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
<u>Alaska</u>										1
<u>Aleutian Islands</u>										2
										3
<u>Ragged Point</u>										4
<u>Quail Bay</u>									"	5
<u>Kagalaska Island</u>									"	6
<u>Sharp Cape</u>									"	7
<u>Kaga Point</u>									"	8
<u>Kagalaska Strait</u>									"	9
<u>Adak Island</u>									"	10
<u>Boat Point</u>									"	11
<u>Boat Bay</u>										12
<u>Elf Island</u>										13
<u>Camel Bay Cove</u>										14
<u>Crone Island</u>										15
										16
										17
										18
										19
<u>Sweeper Cove</u>										20
										21
										22
										23
										24
										25
										26
										27

} for title

BAY

(tide station)

Names approved
5-4-56. G. Heck

(tide station, off sheet) BAY

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. .8239....

Records accompanying survey:

Boat sheets ..3...; sounding vols. .9...; wire drag vols.;
bomb vols.; graphic recorder rolls 4-Envelopes
special reports, etc. 1-Descriptive report, 1-Smooth sheet, and.....
1-Envelope of Shore Plotting Abstracts.....

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

Number of positions on sheet		2228
Number of positions checked		44
Number of positions revised		9
Number of soundings revised (refers to depth only)		Phase 154 TOTAL 261
Number of soundings erroneously spaced		12
Number of signals erroneously plotted or transferred		—
Topographic details	Time	8 hrs
Junctions	Time	12 hrs
Verification of soundings from graphic record	Time	8 hrs

Verification by *Ernest Thomas* Total time 12.8 hrs Date 4/10/58
add. 15 5/22/58
Reviewed by *Ingelskind* Time 44 Date 5/14/58

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8239

FIELD NO. EX-2555

Alaska-Aleutian Islands, South Coast of Adak and Kagalaska
Islands, Crone Island to Quail Bay

Surveyed: Aug. 1955

Scale 1:20,000

Project No. 1218

Soundings:

Control:

808 Depth Recorder

Shoran

Hand lead

Sextant fixes on shore
signals

Chief of Party - S. B. Grenell

Surveyed by - S. B. Grenell, K. B. Jeffers, E. F. Hicks, F. X. Popper,
G. E. Haradan and S. L. Hollis

Protracted by - G. E. Haraden

Soundings plotted by - G. E. Haraden

Verified and inked by - E. Thomas

Reviewed by - I. M. Zeskind

Date: 5/14/58

Inspected by - R. H. Carstens

1. Shoreline and Control

The shoreline originates with reviewed air-photographic surveys T-11326, T-11331, T-11332 and T-11333 of 1953-54.

The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated, except close inshore where the foul character of the bottom prevented development to the low-water line.

The bottom is very irregular in depths less than 50 fms. and fairly smooth in greater depths. Submarine feature such as pinnacles, shoals, troughs, ridges, ledges and reefs contribute to the bottom configuration.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-8240 (1955) on the northeast, with H-8235 (1955) on the east and south, with H-8234 (1955) on the southwest, with H-8238 (1955) on the west and H-8071 (1953-56) on the north at the southern end of Kagalaska Strait.

5. Comparison with Prior Surveys

H-6890 (1933) U.S.N., 1-15,000
H-6893 (1934) U.S.N., 1-15,000
H-6899 (1934) U.S.N., 1-60,000

A comparison between the U. S. Navy reconnaissance surveys and the present survey reveals in general only minor differences in depths of 1-4 fms., except in several areas where greater differences are noted. An example of these differences in depths occurs in lat. $51^{\circ}43.60'$, long. $176^{\circ}23.05'$, where a prior depth of 24 fms. (charted) falls in present depths of 43 fms.

These discrepancies in depths are attributed to weak control, improper spacing of soundings and errors in depths on the Navy surveys. A comparison between the U. S. Navy and the present surveys also reveals discrepancies in the delineation of the shorelines, islets and rocks. These discrepancies are attributed to the reconnaissance nature of the Navy surveys.

The present survey is adequate to supersede the Navy surveys within the common area.

6. Comparison with Chart 9141 (Latest print date 9-29-52)
Chart 9193 (Latest print date 6-3-57)

A. Hydrography

Chart 9141: The charted hydrography originates principally with the previously discussed Navy surveys which need no further consideration, supplemented by several soundings from the present survey prior to verification and review.

Chart 9193: The charted hydrography originates principally with the present survey prior to verification and review, and the Navy surveys previously discussed which need no further consideration. Only minor differences of 1-2 fms. are noted in the charted present survey depths after verification and review. The 1-fm. sounding charted in lat. $51^{\circ}44.9'$ long. $176^{\circ}30.3'$ should be replaced by the present survey rock awash symbol.

The present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

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

7. Condition of Survey

- a. The Descriptive Report and sounding Records are complete and comprehensive.
- b. The smooth plotting was accurately done, except that about 150 soundings which were taken by the ship EXPLORER were revised as much as 2 fms. because of the actual phase correction varying from the mean used in the reduction of soundings.


8. Compliance with Project Instructions

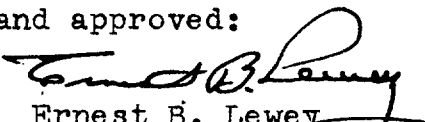
The survey adequately complies with the Project Instructions.

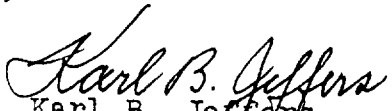
9. Additional Field Work Recommended

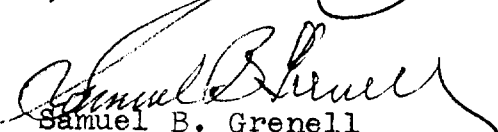
The present survey is considered basic and no additional field work is recommended.

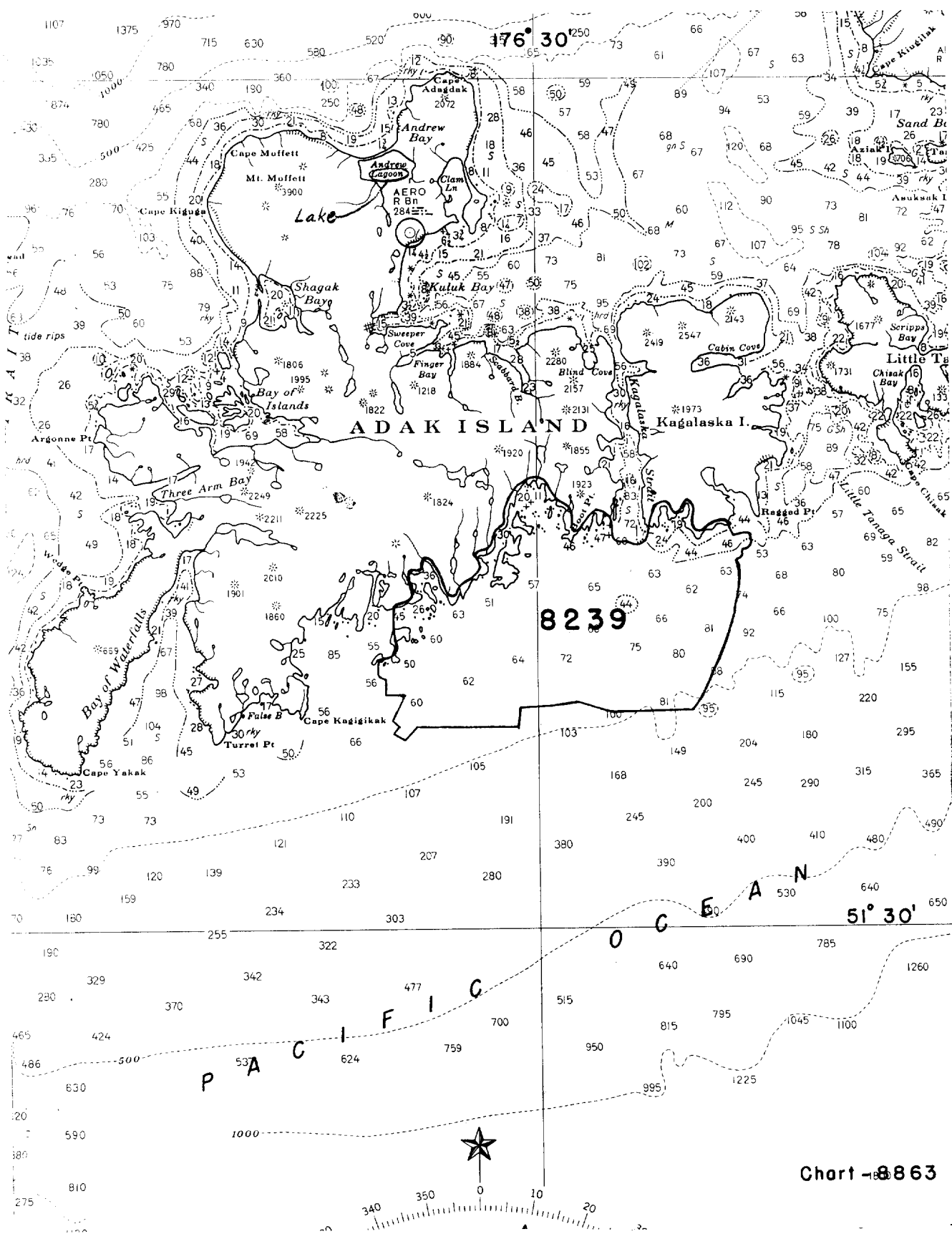
Examined and approved:


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DIVISION OF COASTAL SURVEY:

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HYDROGRAPHIC SHEET

Locality Aleutian Islands, Alaska

Height of mean high water above plane of reference is 3.6 feet.

William H. Hooper

Chief, Division of Tides and Currents, Branch

