

8056

Diag. Cht. Nos. 8863-3 & 9000-1

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. Ex-6153 Office No. H-8056

LOCALITY

State Alaska

General locality Aleutian Islands

Locality South of Tanaga and Kanaga Islands

19 53

CHIEF OF PARTY

S. B. Grenell

LIBRARY & ARCHIVES

DATE February 24, 1954

8056

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-8056

Field No. EX-6153

State Alaska

General locality Alentian Islands

Locality South of Kanaga and Tanaga Islands

Scale 1:60,000 Date of survey 28 July - 1 September 1953

Instructions dated 19 March 1952, 20 February 1953

Vessel EXPLORER

Chief of party S. B. Grenell

Surveyed by S. B. Grenell, F. G. Johnson, J. C. Tison, Jr., H. G. Conerly, C. W. Clark, D. M. Whipp, and F. J. Tucker, Jr.

Soundings taken by fathometer, ~~graphic recorder, hand lead, and~~ 808 No. 113 S, EDO No. 4.

Fathograms scaled by V. Engustian, H. A. Garcia

Fathograms checked by H. G. Conerly, R. F. Lanier

Protracted by F. J. Tucker, Jr.

Soundings penciled by F. J. Tucker, Jr.

Soundings in fathoms ~~feet~~ at ~~MLLW~~ MLLW and are based on

REMARKS: a velocity of sound of 800 fms/sec

Handwritten mark

DESCRIPTIVE REPORT
To Accompany

HYDROGRAPHIC SURVEY H-8056
Field No. EX-6153
South of Tanaga and Kanaga Islands
Scale 1:60,000
1953

USC&GSS EXPLORER

S. B. Grenell, Comdg.

Surveyed by: S. B. Grenell, F. G. Johnson, J. C. Tison Jr., H. G. Conerly,
C. W. Clark, D. M. Whipp, F. J. Tucker, Jr.

A. PROJECT

Project CS-218, original instructions dated 19 March 1952, supplemental instructions dated 20 February 1953. Letter No. 22/NEK, S-1-EX dated 6 April 1953, Subject: Clarification of Instructions.

B. SURVEY LIMITS AND DATES

This survey includes offshore hydrography south of Tanaga and Kanaga Islands and the southern approaches to Kanaga Pass, between offshore EPI and inshore launch surveys.

Hydrography was accomplished from 28 July 1953 to 1 September 1953.

Limits of hydrography are 177-08 W. to 178-04 W and 51-20 N. to 51-40 N.

Junctions were made with:

H-7978 (1952), scale 1:400,000 (at south limits of sheet)
H-7977 (1952), scale 1:100,000 (west limit of sheet)
H-7051 (1944-45), scale 1:40,000 (south of Cape Sasmik)
H-7023 (1944), scale 1:40,000 (southeast of Cape Sasmik)
H-7081 (1945), scale 1:20,000 (Kanaga Pass)

Junctions made with contemporary surveys:

EX-2153 (H-8051), scale 1:20,000 (southeast of Cape Sasmik)
EX-2353 (H-8053), scale 1:20,000 (north limit, Kanaga Pass)
EX-2553 (H-8055), scale 1:20,000 (north limit, east of Cape Chunu)
EX-4254 (H-8140) " 1:40 000 (northeast of present survey)

~~There is no adjoining survey to the east of this sheet.~~

C. VESSEL AND EQUIPMENT

All hydrography on this survey was accomplished by the Ship EXPLORER. Turning radius of EXPLORER at standard speed:

Full left rudder - 275 meters
Full right rudder - 360 meters

All soundings were taken with the EDO fathometer No. 4 and 808 fathometer No. 113 S. The EDO fathometer was used in all depths and the 808 fathometer was used in depths up to 120 fathoms.

Sounding Machine No. H 117 was used for wire soundings taken as bottom samples were obtained.

D. TIDE AND CURRENT STATIONS

Tide reductions were obtained from data recorded by the portable tide gage at Cape Chunu, Lat. 51-39.9, Long. 177-38.1. No time or range corrections were applied.

There were no current stations within the limits of this survey.

E. SMOOTH SHEET

The projection and shoran arcs were made by hand by the personnel of the Seattle Processing Office.

No shoreline was plotted on the smooth sheet.

F. CONTROL STATIONS

Control is based on third-order triangulation established by this party during the current season.

Shoran station SIX is the same as SASMIK, 1953.

Shoran stations DEN and OTT are unmarked fourth-order triangulation stations. These stations were located by distances and directions from stations DENEK, 1953 and OTTER, 1953. The computations of the positions of DEN and OTT are included in the records of this sheet.

G. SHORELINE AND TOPOGRAPHY

Shoreline on the boat sheet was transferred by projector from charts 9145 and 9146.

No shoreline was plotted on the smooth sheet.
from charts 9145 and 9146

shoreline added

H. SOUNDINGS

All soundings are in fathoms and obtained by echo sounding equipment.

Sounding lines were spaced in accordance with the instructions.

See "Special Report on Fathometer Corrections - USC&GSS EXPLORER - 1953 Season". *in Library*

I. CONTROL OF HYDROGRAPHY

All hydrography was controlled by shoran. A shoran correction was applied to every position. See "Special Report on Shoran - Ship EXPLORER - 27 July to 11 September 1953". *in Library*

J. ADEQUACY OF SURVEY

This survey is considered complete and adequate. It should supercede all previous surveys of the area consisting only of track lines and reconnaissance surveys. There are no holidays within the limits of this sheet.

The junctions with adjoining surveys are generally satisfactory and depth curves can be adequately drawn except in areas noted below.

Discrepancies at junctions are noted as follows:

Lat. 51-22	H-7978	1020 fms.
Long. 177-48	H-8056	875-900 fms.
Lat. 51-27	H-7977	200-580 fms.
Long. 178-01	H-8056	300-742 fms.

1020 eliminated - displaced - not needed.

The easterly line on H-7977 may be displaced. This line is on a steep slope and a slight adjustment would bring the surveys into close agreement.

Lat. 51-32.2	H-7977	470 fms.
Long. 177-01	H-8056	363 fms. 353
Lat. 51-31.8	H-7977	500 fms.
Long. 177-01	H-8056	445 fms.
Lat. 51- 35 ³³ to 51- 35.5 ³³	H-7977	283 & 202 fms.
Long. 177-01	H-8056	169 & 112 fms.

All sdg's are on line IF-4F (H-7977) which has been adjusted bringing all sdg's into agreement

Junctions with H-8053 and H-8055 will be made on those sheets after the smooth sheets are plotted.

K. CROSSLINES

Crosslines were run to the extent of 6% of the regular system of sounding lines.

There are no large discrepancies at any crossing which will move the depth curves appreciably. Per cent of crossing under 1% - 50.5%, under 2% - 79.9%, under 3% - 93%.

L. COMPARISON WITH PRIOR SURVEYS

The only prior survey in this area is reconnaissance survey H-7049 (1944), scale 1:160,000. A comparison with H-7049 was not made on the smooth sheet. A comparison made with the boat sheet indicates soundings on H-7049 are considerably displaced. H-7049 should be entirely superseded by this survey in the common area. Station PYLAK, 1943 used for control on H-7049 is on erroneous position.

Shoaler depths were obtained with additional development at southwest corner of sheet and junction with H-7977. See N, Dangers and Shoals.

M. COMPARISON WITH CHART

Comparisons with Chart 8863, print date 1/14/52, and Chart 9145, print date 9/9/48, were not made on the smooth sheet. Comparison with the boat sheet indicates wide discrepancies in many soundings and occasional agreement on some soundings.

Item No. 1, at Lat. 51-28.0 and Long. 177-58.5 on Preliminary Review of Chart 8863, a 233-fathom sounding, was disproved at the charted location. The true position of this sounding is apparently in the shoaler area 3 to 4 miles southwest of the charted position.

This survey should supersede all soundings on charts 8863 and 9145 in the common area.

N. DANGERS AND SHOALS

This is an offshore survey and no dangers were found.

The shoal area, least depth 200 fathoms, at Lat. 51-25.5 and Long. 178-01.0, on H-7977 (1952) was developed. The least depth in this vicinity on this survey is 125 fathoms at Lat. 51-25.2 and Long. 178-02.0, position 15G to 16G. Another summit on this same feature at 51-23.75, Long. 177-59.4, position 630, has a least depth of 207 fathoms.

O. COAST PILOT INFORMATION

There are no anchorages within the area of this survey. See Special Report on Coast Pilot Notes.

P. AIDS TO NAVIGATION

No aids to navigation, bridges, overhead or submerged cables exist within the limits of this survey.

Q. LAND MARKS FOR CHARTS

This is an offshore survey and no landmarks exist in the area.

R. GEOGRAPHIC NAMES *on file 854 L.H.*

See "Special Report on Geographic Names - Tanaga and Kanaga Islands - Aleutian Islands, Alaska - USC&GSS EXPLORER - Season 1953".

No new names recommended apply to the area of this survey.

Z. TABULATION OF APPLICABLE DATA

- (a) Tide data forwarded to Washington office 14 September, 1953.
- (b) Special Report on Geographic Names - Tanaga and Kanaga Islands - 1953 forwarded to Washington office 30 November 1953.
- (c) Triangulation Data - 1953 forwarded to Washington office 7 December 1953.
- (d) Coast Pilot Notes - U.S. Coast Pilot - Alaska Part II - Yakutat Bay to Arctic Ocean - Ship EXPLORER - 1953.
- (e) Special Report on Fathometer Corrections - Ship EXPLORER 1953.
- (f) Special Report on Shoreline - Ship EXPLORER 1953.

Forwarded with this report are the following:

- (g) One Boat Sheet EX-6153.
- (h) One envelope of fathograms.
- (i) Four sounding volumes
- (j) Shoreline Plotting Abstract (31 sheets)
- (k) Computations for Geographic Positions of DEN, OPT and NEE.
- (l) One smooth sheet H-8056.
- (m) Five overlap tracings of junctions with adjoining surveys.

Respectfully submitted

Floyd G. Tucker, Jr.
Floyd G. Tucker, Jr.
Ensign, C&GS

STATISTICS

Hydrographic Survey H-8056

Field No. EX-6153

<u>Date</u> <u>Ship</u>	<u>Day</u>	<u>Vol.</u>	<u>No. of Pos.</u>	<u>Statute Miles</u>
28-7	A	1	105	106.4
29-7	B	1 & 2	105	110.8
30-7	C	2 & 3	134	136.3
9-8	D	3	88	96.5
10-8	E	3 & 4	89	93.1
11-9	F	4	72	78.8
14	G	4	53	45.1
4-10	H	4	21	10.4
Totals		4	667	677.4

Area: 488 square statute miles.

Per Cent of Crosslines: 6%.

TIDAL NOTE
for
HYDROGRAPHIC SHEET
Field No. EX 6153
Reg. No. H 8056

For tide reducers for the whole sheet a tide gage was maintained at Cape Chunu, Lat. $51^{\circ} 39.9'$, Long. $177^{\circ} 38.1'$.

The datum is MLLW.

The records were forwarded to the Washington Office for the staff reading of MLLW. The reading was 1.7 feet.

TIDE REDUCERS for SHEET FIELD No. EX 6153

Reg. No. H 8056

<u>Date</u>	<u>Day Letter and Vessel</u>	<u>Reducer., fms</u>	<u>From</u>	<u>To</u>
July 28	"A" Ship	0.0	1000	1100
		- 0.1	1100	1150
		0.2	1150	1240
		0.3	1240	1325
		0.4	1325	1415
		0.5	1415	1520
		0.6	1520	1820
		0.5	1820	2030
July 29	"B" "	0.1	0743	0833
		0.0	0833	1125
		0.1	1125	1220
		0.2	1220	1303
		0.3	1303	1344
		0.4	1344	1431
		0.5	1431	1533
		0.6	1533	1940
July 30	"C" "	0.3	0720	0830
		0.2	0830	1220 ³⁰
		0.3	1230	1330
		0.4	1330	1420
		0.5	1420	1509
		0.6	1509	1615
		0.7	1615	1933
		0.6	1933	2047
Aug. 9	"D" "	+ 0.1	0710	0935
		0.0	0935	1047
		0.1	1047	1140
		0.2	1140	1227
		0.3	1227	1316
		0.4	1316	1407
		0.5	1407	2130
		0.6	2130	2400
Aug. 10	"E" "	0.0	0647	1040
		0.1	1040	1140
		0.2	1140	1236
		0.3	1236	1327
		0.4	1327	1423
		0.5	1423	2317

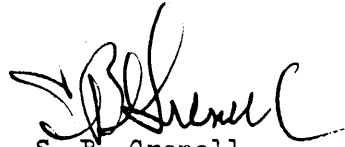
Aug. 11	"F" Ship	0.1	0720	1133
		0.2	1133	1226
		0.3	1226	1327
		0.4	1327	1443
		0.5	1443	1950
Aug. 14	"G" "	0.4	0600	0846
		0.3	0846	1212
		0.4	1212	1335
		0.5	1335	1526
		0.6	1526	1820
Sept. 1	"H" "	0.3	0728	0823
		0.4	0823	0920
		0.5	0920	1130
		0.6	1130	1640
		0.7	1640	2116

APPROVAL SHEETHYDROGRAPHIC SURVEY NO. H-8056

The smooth sheet, sounding volumes, fathograms, and descriptive report have been examined and are approved.

This survey is complete and adequate and no additional field work is recommended.

All hydrography was done by the USC&GSS EXPLORER and was under constant supervision of the Chief of Party.



S. B. Grenell
Commander, C&GS
Comdg. Ship EXPLORER

GEOGRAPHIC NAMES

Survey No. H-8056

Name on Survey										
	A	B	C	D	E	F	G	H	K	
	On Chart No.	On previous survey No.	On U. S. Quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List		
<u>Alaska</u>				(for title)						1
<u>Aleutian Islands</u>				"	"					2
<u>Tanaga Island</u>				"	"				B.N.	3
<u>Kanaga Island</u>				"	"				"	4
<u>Kanaga Pass</u>										5
										6
										7
										8
										9
										10
										11
<u>Cape Churnu</u>				(tide station)						12
(Kanaga I.)										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Names approved
2-26-51
L. Heck.

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8056..

Records accompanying survey:

Boat sheets ...1...; sounding vols. 4....; wire drag vols.;
 bomb vols.; graphic recorder rolls 1. Eny;
 special reports, etc. 1. Smooth Sheet; 1. Descriptive Report; 1. Cahier - 31 Sheet;
 Sboran. Plotting Abstracts & 2 Sheets. Computation of Geographic Positions; 5 Trac-
 ings of junction surveys;

The following statistics will be submitted with the cartog-
 rapher's report on the sheet:

Number of positions on sheet	667	667	667
Number of positions checked	7	48	60
Number of positions revised	—	2	0
Number of soundings revised (refers to depth only)	—	18	0
Number of soundings erroneously spaced	—	24	0
Number of signals erroneously plotted or transferred	—	—	—
Topographic details	Time	—	—
Junctions	Time	16	hrs.
Verification of soundings from graphic record	Time	2	hrs.
Preliminary Verif by A. R. STIRNI	52 hrs	7/5/55	
Verification by P. E. HARRISON	16 hrs	11/22/55	
<i>J. C. Chambers</i>	25 hrs	12/9/55	
.....Total time
Reviewed by..... A. R. STIRNI	Time	40 hrs	Date 7/12/55
Addendum A. R. STIRNI	60 hrs	3/26/56	

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

23 March 1954

Division of Charts: R. H. Carstens

Plane of reference approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 8056

Locality Aleutian Islands, Alaska

Chief of Party: S. B. Grenell in 1953
Plane of reference is mean lower low water, reading
1.7 ft. on tide staff at Cape Chunu
7.8 ft. below B. M. 1 (1953)

Height of mean high water above plane of reference is 4.1 feet.

Condition of records satisfactory except as noted below:

E.C. McKay
Section of Tides
Chief, Division of Tides and Currents.

DIVISION OF CHARTS
REVIEW SECTION - NAUTICAL CHART BRANCH
REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8056

FIELD NO. EX-6153

Alaska, Aleutian Islands, South of Tanaga and Kanaga Islands

Project No. CS-218

Surveyed - 28 July - 1 Sept. 1953

Scale 1:60,000

Soundings:

Control:

808 Fathometer
Edo Fathometer
Sounding machine

Shoran

Chief of Party - S. B. Grenell

Surveyed by - C. W. Clark, F. G. Johnson, J. C. Tison, Jr.
H. G. Conerly, S. B. Grenell, D. M. Whipp and
F. J. Tucker, Jr.

Protracted by - F. J. Tucker, Jr.

Soundings plotted by - F. J. Tucker, Jr.

Preliminary Verification - A. R. Stirni

Verified and inked by - *P.E. Harrison, J.C. Chambers*

Reviewed by - A. R. Stirni 7/12/55

Inspected by - R. H. Carstens

1. Shoreline and Control

Shoreline for orientation was applied from Nautical Charts 9145 and 9146. Charted shoreline on Tanaga Island originates with a U.S.G.S. map of 1942 (B.P. 39334) and on Kanaga Island with a compilation of ratioed nine lens photographs taken in 1945 (B.P.'s 39505-07).

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

2. Sounding Line Crossings

Depths at sounding line crossings are in good agreement.

3. Depth Curves and Submarine Relief

The usual depth curves are adequately delineated.

The area surveyed comprises part of the sloping bottom south of Tanaga and Kanaga Islands and extends from approximate 40-fm.

depths to approximate 1000-fm. depths. Deep, irregular canyons mark the entire area.

4. Junctions with Contemporary Surveys

The present survey has been compared with all junctional surveys and adjustments have been made where necessary to effect satisfactory agreement.

Junctional surveys are as follows:

Verified Surveys

H-7023 (1944), on the northwest.
H-7051 (1944-45), on the northwest.
H-7081 (1945), on the north.
H-7977 (1952), on the west. (*partially verified*)
H-7978 (1952), on the south.

Unverified Surveys

H-8051 (1953), on the northwest.
H-8053 (1953), on the north.
H-8055 (1953), on the northeast.
H-8140 (1954), on the east.

The transfer of junctional soundings is deferred pending complete verification of the present survey as well as the junctional surveys which are unverified.

5. Comparison with Prior Surveys

H-7049 (1945), 1:160,000

The only prior survey in the area by this Bureau is H-7049 (1945), a reconnaissance survey which crosses the present survey area with two sounding lines. A comparison between this prior survey and the present survey reveals differences in the positioning of sounding lines of as much as 1200 meters. As the reconnaissance survey was controlled by a combination of sextant fixes, bearings, radar, and dead reckoning, the positions are not considered to be accurate in comparison with the shore controlled positions of the present survey.

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

6. Comparison with Chart 8863 (Latest print date 1/14/52)A. Hydrography

Charted hydrography originates with the previously discussed survey H-7049, reconnaissance soundings from an unverified field compilation of 1944 (B.P. 39018), and U. S. Navy surveys and other sources to 1939. The 233-fm. sounding charted at lat. $51^{\circ}28.3'$, long. $177^{\circ}58.5'$ in present survey depths of approximately 750 fms. was applied to the first edition (1894) of superseded Chart 9100 from an undetermined source. A more likely location for this sounding would be on the shoal area 3-4 miles south and southwest of the charted position. Prior reconnaissance soundings provide only generalized information regarding bottom configuration and are entirely superseded by the present survey.

B. Aids to Navigation

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

7. Condition of Survey

(a) the sounding records and Descriptive Report are complete and comprehensive.

(b) Preliminary inspection and verification indicates that the smooth plotting was accurately done.

(c) Bottom characteristics were obtained only in the inshore area.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

This is a good basic survey and no additional field work is required.

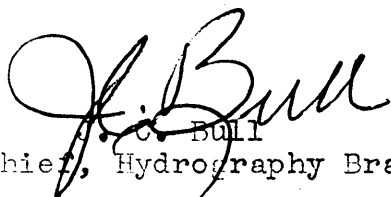
Examined and Approved:



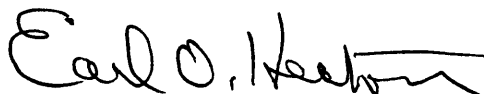
H. R. Edmonston
Chief, Nautical Chart Branch



E. R. McCarthy
Acting Chief, Chart Division



J. C. Bull
Chief, Hydrography Branch



Earl O. Heaton
Chief, Division of Coastal Surveys

Addendum to Review

H-8056 (1953)

Inked by - P. E. Harrison, J. C. Chambers
Review Addendum by - A. R. Stirni 3/26/56
Inspected by - R. H. Carstens

The verification of this survey is now complete.

Junctions with Contemporary Surveys

Adequate junctions were effected with the following reviewed surveys:

H-7023 (1944) on the northwest.
H-7051 (1944-45) on the northwest.
H-7081 (1945) on the north.
H-7978 (1952) on the south.
H-8053 (1953) on the north

Other junctions are deferred pending the reviews of the following surveys:

H-7977 (1952) on the west.
H-8051 (1953) on the northwest.
H-8055 (1953) on the northeast.
H-8140 (1954) on the east.

Comparison with Chart 9145 (drawing 2/15/56)
Chart 9193 (print date 4/7/54)
Chart 8863 (drawing (no date))

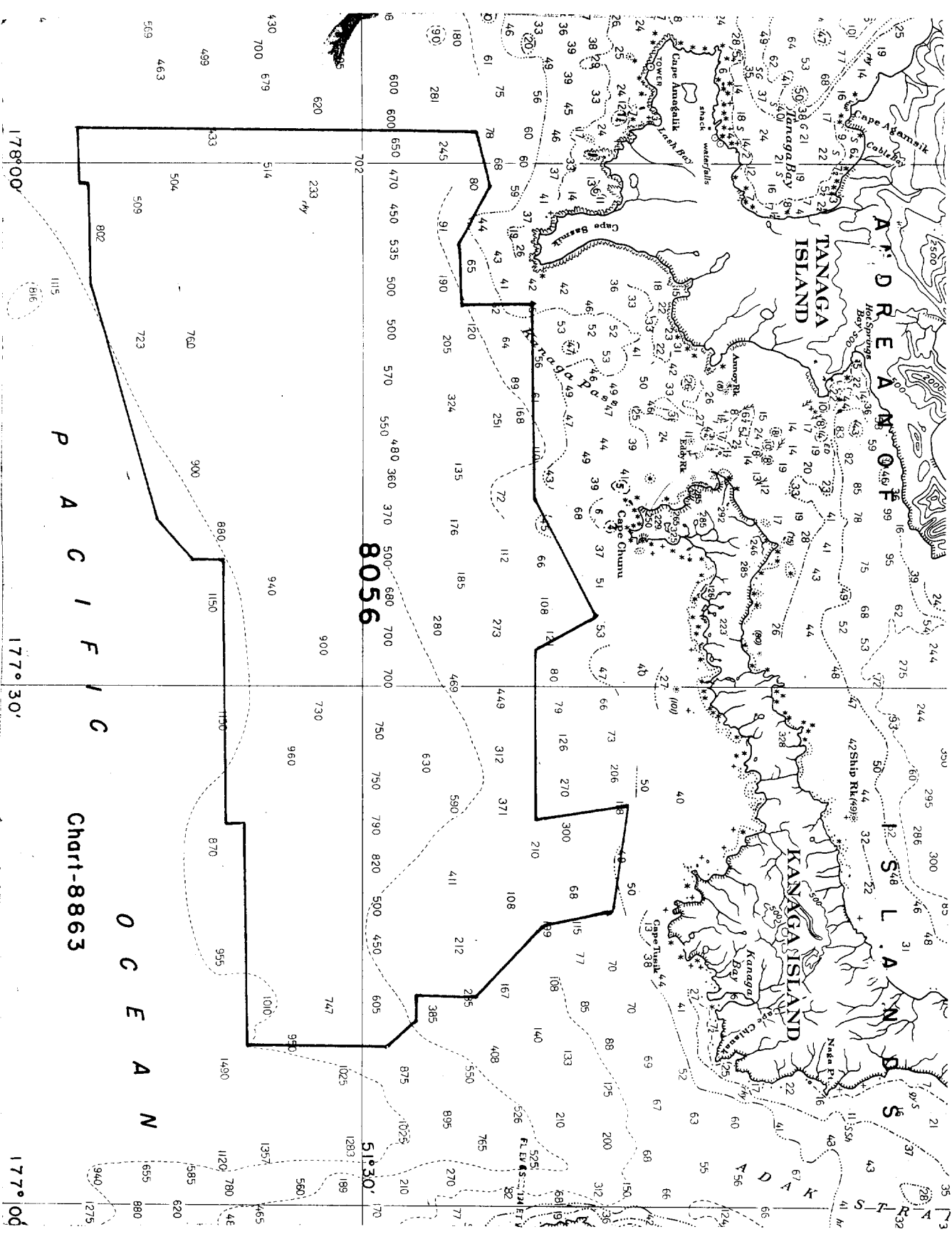
The charted hydrography on the drawing of Chart 9145 and on Chart 9193 originates with the present survey before verification and review. The charted hydrography on the drawing of Chart 8863 originates with the present survey after preliminary verification and review. All charted information is in accord with the present survey.

Condition of Survey

Completion of the verification reveals that the smooth plotting was well done.

Approved:

E. R. McCarthy
E. R. McCarthy
Chief, Chart Division



178° 00' 177° 30' 177° 00'

PACIFIC OCEAN

Chart-8863

8056

51° 30'

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8056

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
4/26/54	9193	<i>STE</i> 120	Before After Verification and Review <i>completely applied</i>
10/7/54	9145	<i>JAM</i> 40	Before After Verification and Review <i>completely applied</i>
1/56	8863	<i>JFR</i> 300	Before After ^{Preliminary} Verification and Review <i>completely applied</i>
12/17/58	^{Reconst} 8863	<i>JFW</i>	Before After Verification and Review <i>completely applied after final V&R</i>
12/30/92	16467	<i>Joseph Robinson</i>	Before After Verification and Review
			Before After Verification and Review
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			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.