

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-2453 Office No. H-8054					
LOCALITY					
State Alaska					
General locality Aleutian Islands					
Locality North Side Of Tenaga Island					
19 / 4 53					
CHIEF OF PARTY					
S. B. Grenell					
LIBRARY & ARCHIVES					
DATE MARCH 31, 1954					

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-8054

Field No. EX-2453

State Alaska
General locality Aleutian Islands
Locality North side of Tanaga Island
Scale 1:20,000 Date of survey 6/25/53 to 9/12/53
Instructions dated 19 March 1952, 20 February 1953, 5 August 1952
Vessel USC&GSS EXPLORER
Chief of party S. B. Grenell
Surveyed by R. F. Lanier, J. J. Dermody
Soundings taken by fathometer, graphic recorder, hand lead, mire.
Fathograms scaled by Fathometer operators, F. J. Tucker
F. J. Tucker Fathograms checked by R. F. Lanier, J. J. Dermody, V. Engustian, H. A. Garbia
Protracted by H. A. Garcia
Soundings penciled byH. A. Garcia
Soundings in fathoms feet at MKW MLLW and are based on a
REMARKS: velocity of sound in water of 800 fms/sec

U. S. GOVERNMENT PRINTING OFFICE 77703:

DESCRIPTIVE REPORT

to accompany
Hydrographic Sheet H-8054
Field Number EX-2453
Tanaga Island, Alaska

1953

Scale 1:20,000

USC&GSS EXPLORER S. B. Grenell, Commanding Surveyed by: R. F. Lanier, J. J. Dermody

A. PROJECT

This survey was executed in accordance with the following instructions for Project CS-218:

Original Instructions dated 19 March 1952 Supplemental Instructions dated 20 February 1953 Modification of Instructions dated 5 August 1952

B. SURVEY LIMITS AND DATES

This survey covers the inshore hydrography on the north side of Tanaga Island from Cape Sudak westward to Longitude 178-01-30.

Date of beginning survey, 25 June 1953.

Date of ending survey, 12 September 1953.

Junctions with prior surveys: None.

Junctions with contemporary surveys:

2 (M53) EX-2253 (H-805%) at west limit of sheet. EX-6253 (H-8057) at offshore limits of sheet.

(1953-54) H. 8141 (1954) East of Cape Sudak)

C. VESSELS AND EQUIPMENT

All hydrography was done by launches operating from the Ship EXPLORER.

808 fathometers were used for all hydrography except for hand lead soundings at detached positions while obtaining bottom samples.

Fathometers used:

Launch No. 1 - 808 fathometer No. 49.

Launch No. 2 - 808 fathometer No. 50.

Launch No. 3 - 808 fathometers Nos. 60, 127.

D. TIDE AND CURRENT STATIONS

Portable tide gages were maintained at Gusty Bay and Barabara

Tide réducers were obtained from data at Barabara Island tide station for the last day of hydrography on the sheet, 12 September, k day - Launch No. 2 and c day - Launch No. 3.

On all other days tide reducers were obtained from data at Gusty Bay tide station.

See tide note and list of reducers attached to this report.

There are no current stations within the area of this report.

E. SMOOTH SHEET

The smooth sheet projection was made by hand by the Seattle Processing Office.

Triangulation stations were plotted by the Seattle Processing Office.

Topographic stations for which geographic positions were computed were plotted from the geographic positions by the Seattle Processing Office. See par. F., Control Stations.

Other topographic stations were transferred direct to the smooth sheet by pricking thru graphic control manuscripts T-9922, T-9923, T-9929, T-9930, T-9931.

Hydrographic stations were plotted by conventional methods.

Shoreline and topographic details were transferred direct to the smooth sheet from bromoil prints of topographic manuscripts T-9922, T-9923, T-9929, T-9930 and T-9931 (1955).

Shoreline and topographic details verified in accordance with subject 757 of the Hydrographic Manual.

F. CONTROL STATIONS

Triangulation stations SUDAK, ARIES and BUMPY were established by this party in 1953.

Geographic positions of topographic stations BETA, WEB, SAL, MARS and GUST were computed from fourth-order theodolite observations. See also topographic manuscripts T-9923, T-9929 and T-9930 (1953).

Other topographic stations are photo-hydro stations located by photogrammetric methods on manuscripts T-9922, T-9923, T-9929 thru T-9931 from 1953 field inspection data.

The position of JAN on T-9931 does not agree with the boat sheet and fixes will not plot correctly using this position. The position on the smooth sheet was transferred from the boat sheet relative to adjacent signals and final shoreline.

USED in photon

Other hydrographic stations were located by conventional methods.

Theodolite directions and sextant angles observed on some signals were furnished with photogrammetric data for Tanaga Island.

Marked topographic stations established are BETA, $\frac{\text{MARG}}{\text{MARG}}$, GUST and JINX.

G. SHORELINE AND TOPOGRAPHY

Shoreline and topographic details are from photogrammetric compilation of manuscripts T-9922, T-9923, T-9929 thru T-9931 from 1953 field inspection data.

All offshore signals are on rocks.

Sextant fixes and cuts recorded in sounding volumes on rocks off signals PIE and GAR are the same data furnished with photogrammetric data for plotting on manuscripts.

There are no discrepancies in topographic detail indicated by the hydrography.

Most references to rocks refer to rocks on topographic manuscripts although some references would place the rocks in a slightly different position.

Rocks located by the hydrography and not on the topographic manuscripts are:

*Sunken rock - Lat. 51-54.8, Long. 178-00.3. +

Sunken rock - Lat. 51-50.95, Long. 177-47.25. Sndg 15 fm

Sunker rock - Lat. 51-50.8, Long. 177-41.2.

Kelp areas defined by the hydrography are not in agreement with the topographic manuscripts. Kelp areas shown were defined by the hydrography. \ltimes

The low-water line was not defined by soundings. A fringe of kelp along rocky shoreline and breakers on beaches prevented sounding into law-water line. Inchese foul areas transferred from T. hed.

Shoreline on the boat sheet was transferred from bromoil prints of preliminary manuscripts RS-426.

H. SOUNDINGS

All soundings on sounding lines were measured with echo sounding equipment listed in par. C. See "Special Report on Fathometer Corrections - Ship EXPLORER - 1953".

Hand lead soundings were obtained at detached positions as bottom samples were obtained.

I. CONTROL OF HYDROGRAPHY

All hydrography was controlled by visual sextant fixes on shore stations.

J. ADEQUACY OF SURVEY

The survey is considered complete and adequate for charting and complies with the Project Instructions and the Hydrographic Manual except that additional splits are recommended between widely spaced lines east of Long. 177-40. Completion of these splits was prevented by bad weather at the end of the season.

Junctions with adjoining surveys are satisfactory and depth curves can be adequately drawn. Survey on east not yet registered.

There are no holidays.

K. CROSSLINES

Crosslines were run to the extent of about 15% of the regular system of sounding lines.

There are no large discrepancies at crossings and depth curves can be adequately drawn.

L. COMPARISON WITH PRIOR SURVEYS

This is a new survey and no prior surveys exist.

Depths at junctions with contemporary surveys are in close agreement. Same adjustments were made during review,

M. COMPARISON WITH CHART

There are no soundings on Chart 9145, print date 8/13/51, and chart 9146, print date 8/27/51, within the area of this survey.

how charts being compiled

Shoreline on Charts 9145 and 9146 is considerably in error in detail, shape and position. There is a large displacement in shoreline in the vicinity of Bumpy Point and Gusty Bay. Shoreline and topographic details are completely revised by photogrammetric compilation from 1953 field inspection data.

N. DANGERS AND SHOALS

Dangers consist of the generally rocky shoreline and offlying dangers are relatively close to shore.

Limiting offshore dangers found by this survey are:

Rocks awash 120 meters north of station TRY.

51 °65,3' 1774 **67**,7'

Rocks awash 125 meters north and east of station REV and shoal 3:52.75' area extending farther offshore.

Shoal and kelp area extending offshore from the west side of Gusty Bay. 700 mekri E. of O Leg 51 51.5

Two rocks awash at Lat. 51-51.03, Long. 177-50.9.

Extensive shoal area in southeastern part of Rough Bay.

Sunken rock, least depth 12 fathoms at Lat. 51-50.95, Long. 177-47.25. see G. - Sndy 15 fms

Rock awash at Lat. 51-50.5, Long. 177-42.4. * (3)

Two rocks awash at Lat. 51-50.35, Long. 177-37.5. * (9)

A shoal area with a least depth of 14 fathoms exists at Lat. 51-54.0, Long. 177-54.8.

Other offshore shoal areas are referred to shove under dangers.

O. COAST PILOT INFORMATION

Coast Pilot information was reported in "Coast Pilot Notes - U. S. Coast Pilot - Alaska Part II - Yakutat Bay to Arctic Ocean - Ship EXPLORER - 1953".

Gusty Bay affords a good ship anchorage in southerly weather at about the center of the bay in 16 fathoms, sand bottom.

The ship also anchored in Portage Bight, 0.9 mile off the south and southwest shoreline, in 18 fathoms, sand bottom.

During the survey launches anchored in various places in Gusty Bay, Rough Bay, Portage Bight and in several smaller bights. There are no protected anchorages in northerly weather.

P. AIDS TO NAVIGATION

No aids to navigation exist within the area of this survey.

No bridges, overhead cables, submerged cables or ferry routes exist within the area of this survey.

Q. LANDMARKS FOR CHARTS

Landmarks were reported on Form 567.

Landmarks recommended for charting are:

Waterfall (Ribbon Falls)(Signal HIGH) Pinnacle (Signal SAL) Cabin (Signal CAB)

Other natural landmarks such as peaks, rocks and tangents will appear on charts by symbol and are not recommended specifically as landmarks.

R. GEOGRAPHIC NAMES

See "Special Report on Geographic Names - Tanaga and Kanaga Islands - USC&GSS EXPLORER - Season 1953." On File with &

Z. TABULATION OF APPLICABLE DATA

Forwarded with this report:

Smooth Sheet H-8054

- 3 Boat Sheets EX-2453, EX-2453A, EX-2453B.
- 9 Sounding Volumes, Vols. 1 to 9.
- 2 Tracings of junction surveys H-8052 (1953) and H-8057 (1953). 3 Envelopes of fathograms.

Data forwarded separately:

- 1. Field Inspection Report Maps T-9921 thru T-9923, T-9927 thru T-9931, T-9935 thru T-9937, and T-9942 - Tanaga Island, Alaska - Ship EXPLORER - 1953", including data listed therein, forwarded to Washington Office 25 September 1953.
- 2. Triangulation data 1953 Season forwarded to Washington office 7 December 1953.
- 3. Tide data forwarded to Washington Office 14 September 1953.

- 4. Special Report on Fathometer Corrections Ship EXPLORER 1953.
- 5. Special Report on Geographic Names Tanaga and Kanaga Islands USC&GSS EXPLORER 1953 forwarded to Washington Office 30 November 1953.
- 6. Coast Pilot Notes U. S. Coast Pilot Alaska Part II Yakutat Bay to Arctic Ocean Ship EXPLORER 1953 forwarded to Washington Offide 27 November 1953.
 - 7. Form 567, Landmarks for Charts.

Additional applicable data:

Topographic manuscripts T-9922, T-9923 and T-9929 thru T-9931, Compiled from 1953 field inspection data.

Respectfully submitted

Howard A. Garcia Ensign, USC&GS

STATISTICS

FOR HYDROGRAPHIC SURVEY H-8054 (1953)

USC&GSS EXPLORER

Project CS-218

Vol.	Day	Launch		No. of H.L.		Stat. Miles
No.	Ltr.	No.	Date	or wire andge.	No. Pos.	sndg. lines
1	a	2	6/25/53		129	28.3
1	ъ	2	6/26/53		2 9	6.3
1 & 2	c	2	6/27/53		225	49.9
2	đ	2	6/28/53		124	25.8
2	е	2	7/7/53		37	8.1
2 & 3	f	2	7/17/53	·	114	24.5
3	g	2	7/24/53		206	32.9
4	a	1	6/27/53		4	
5	ъ	1	7/17/53		18	
5	c	1	7/24/53	2	21 1	46.4
6	h	2	7/25/53		202	4925
6 & 8	3	2	7/26/53		118	23.7
7	а.	3	7/25/53	4	194	42.9
7 & 9	ъ	3	7/26/53	1	158	24.4
8	k	2	9/12/53	7	56	9.2
9	c	3	9/12/53	4	180	35.3
9				18	2005	407.2

Area: 37 square statute miles.

TIDAL NOTE

To Accompany

Hydrographic Sheet (Field No. EX-2453) Reg. H-8054

For all but the last day of sounding on this sheet, tide reducers were obtained from a gage maintained at Gusty Bay. Lat. 51-52.45. Long. 177-54.43. Reducers for the last day's field work were taken from the Gage Barabara Island. Lat. 51-48.55. Long. 177-44.52. There were no corrections applied for distance from the gage.

The staff reading of MLLW at Gusty Bay was 4.8 feet and at Barabara Island it was 2.0 feet.

Tide Reducers

For Hydrographic Sheet (Field No. EX-2453) Reg. H-8054

<u>Date</u>	Units Working	Gusty Ba	v Reducers
June 25	Launch #2	+0.2 fm	0900-1110
		+0.1 "	1110-1225
		0.0 #	1225-1325
		-0.1 "	1325-1422
		-0.2 #	1422-1525
		-0.3 #	1525-1650
	•	-0.4 "	1650-1800
The a Tanaga Bay Gusty Bay	bove results were obtained by adjust Gage to a morning and afternoon reastaff.	ing a curv	e from the ned on the
June 26	Launch #2	+0.2 fm	1110-1215
		+0.1 #	1215-1315
		0.0 "	1315-1410
		-0.1 "	1410-1505
		-0.2 M	1505-1620
		-0.3 "	1620-1750
		-0.4 基	
		~0•4 ×	1750-2100
June 27	Launches #1 and #2	+0.2 fm	0810-1245
		+0.1 "	1245-1350
		0.0 #	1350-1445
		-0.1 #	1445-1535
		-0.2 "	1535-1635
		-0.3 "	1635-1750
		-0.4 "	1750-2000
		~~~	1750-2000
June 28	Launch #2	0.0  fm	0735-0818
		+0.1 "	0818-0911
		+0.2 "	0911-1325
		+0.1 "	1325-1425
		0.0 "	1425-1520
		-0.1 "	1520-1615
		-0.2 #	1615-1715
		-0.3 "	1715-1835
		-0.4 "	1835-2200
July ?	Launch #2		
	The state of the s	+0.1 fm	0800-0925
		0.0 #	0925-1030
		-0.1 "	1030-1125
		-0.2 H	1125-1220
		-0.3 "	1220-1330
		-0.4 "	1330-1800
		-0.5 [#]	1800-2000

Date	Units Working	Gusty Bay Reducers
July 17	Launches #1 and #2	-0.3 fm 0800-1100 -0.2 " 1100-1630 -0.3 " 1630-1800 -0.4 " 1800-2000
July 24	Launches #1 and #2	+0.1 fm 0800-1100 0.0 # 1100-1205 -0.1 # 1205-1315 -0.2 # 1315-1425
		-0.3
July 25	Launches #1 and #2	+0.2 fm 0800-1050 -0.1 " 1050-1210 0.0 " 1210-1300 -0.1 " 1300-1410 -0.2 " 1410-1520
July 26	Launches #2 and #3	-0.3 " 1520-1700 -0.4 " 1700-2020 +0.1 fm 0740-0835
		+0.2 " 0835-1130 +0.1 " 1130-1250 0.0 " 1250-1345 -0.1 " 1345-1443
S	7 mars 112 2 110	-0.2
Sept. 12	Launches #1 and #2	Barabara Id. Reducers -0.4 fm 0800-2020

#### GEOGRAPHIC NAMES

# Charted Names

- * BERING SEA
- · BUMPY POINT
- CAPE SUDAK
- · GUSTY BAY
- · TANAGA ISLAND

New names recommended by Special Report on Geographic Names - Tanaga and Kanaga Islands - USC&GSS EXPLORER - 1953.

- · FALLS POINT
- · FORTRESS POINT
- . GAGE POINT
- · PILLBOX ROCK
- · POINT ARIES
- . PORTAGE BIGHT
- · RIBBON FALLS
- . ROUGH BAY

# APPROVAL SHEET

# HYDROGRAPHIC SURVEY NO. H-8054

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

Hydrography was done by launches operating from the ship and boat sheets were examined almost daily by the Chief of Party.

No additional field work is recommended except splits east of Long. 177-40 referred to in par. J., ADEQUACY OF SURVEY. This additional work will be done on an adjoining sheet in 1954. See seize (e)

S. B. Grenell

Commander, USC&GS Comdg. Ship EXPLORER

# Hydrographic Surveys (Chart Division)

# HYDROGRAPHIC SURVEY NO. 4-8054...

Records accompanying survey:		•
Boat sheets; sounding vols; w	ire dra	g vols;
bomb vols; graphic recorder rolls3	Env.	
special reports, etc. 1. Smooth Sheet; 1. Desc	riptive R	eport: 2 Tracings of
junction Surveys:	• • • • • • •	* * * * * * * * * * * * * * * *
The following statistics will be submitted wirepher's report on the sheet:	th the	certog-
Number of positions on sheet		2005
Number of positions checked		.61
Number of positions revised		5
Number of soundings revised (refers to depth only)		6
Number of soundings erroneously spaced		
Number of signals erroneously plotted or transferred		
Topographic details	Time	16 hrs.
Junctions	Time	6 hrs
Verification of soundings from graphic record		8 hrs
Verification by Fined. F. Minnes. Total time	.131.	Date 6/30/58
Verification by Fines F. Montes Total time Reviewed by A.R. Stirni Time	44 27.hrs	Date 8/29/55

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	•	Rough Bay						LUWAKY	<b>-</b>			12
		Point Aries										13
		Portage Bight				• ,						14
		Cape Sudak	<u> </u>			-		.,				15
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#### DIVISION OF CHARTS

#### REVIEW SECTION - NAUTICAL CHART BRANCH

## REVIEW OF HYDROGRAPHIC SURVEY

# REGISTRY NO. H-8054

FIELD NO. EX-2453

Alaska, Aleutian Islands, North Side of Tanaga Island

Project No. CS-218

Surveyed - June, Sept., 1953

Scale 1:20,000

Soundings:

Control:

808 Fathometer

Sextant fixes on shore signals

Chief of Party - S. B. Grenell
Surveyed by - R. F. Lanier, J. J. Dermody
Protracted by - H. A. Garcia
Soundings plotted by - H. A. Garcia
Verified and inked by - E. E. Thomas
Reviewed by - A. R. Stirni 8/29/55
Inspected by - R. H. Carstens

# 1. Shoreline and Control

The shoreline originates with reviewed manuscripts of air-photographic surveys T-9922 (1948-54), T-9923 (1948-54), T-9929 (1948-54), T-9930 (1953-54), and T-9931 (1953-54).

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

# 2. Sounding Line Crossings

The sounding line crossings are in good agreement.

# 3. Depth Curves and Bottom Configuration

The rocky shoreline and the presence of heavy kelp and breakers made complete development of inshore depth curves impracticable. The low-water line is not developed; however, most of the other depth curves less than 5 fms. are partially delineated except north of Cape Sudak in the vicinity of long. 178°38', where soundings define only the 10-fm. curve. Depth curves greater than 10 fms are adequately delineated. The bottom slopes fairly uniformly from the irregular inshore area to the edge of the insular shelf.

# 4. Junctions with Contemporary Surveys

Adjustments have been made which effect harmony between the present survey and surveys H-8052 (1953) on the west and H-8057 (1953-54) on the north. Further disposition of the junctions will be made in the reviews of the latter surveys. The inshore survey which joins the present survey on the east in the vicinity of Cape Sudak has not yet been registered in the Washington Office.

# 5. Comparison with Prior Surveys

There are no prior surveys in the area made either by this Bureau or other agencies.

# 6. <u>Comparison with</u> Chart 9145 (Drawing 10/17/55) Chart 9146 ( " 10/18/55)

# A. Hydrography

The charted hydrography originates with the present survey before verification and review. Minor differences of 1 to 3 fms. are noted between the charted soundings and the present survey after verification and review. These have been marked on the drawing for correction by the compiler.

The present survey supersedes the charted hydrography where differences occur.

# B. Aids to Navigation

No aids to navigation are charted in the survey area. Three landmarks originate with the present survey.

# 7. Condition of Survey

- (a) The sounding records and Descriptive Report are complete and comprehensive.
- (b) The smooth plotting was accurately done.

# 8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

# 9. Additional Field Work

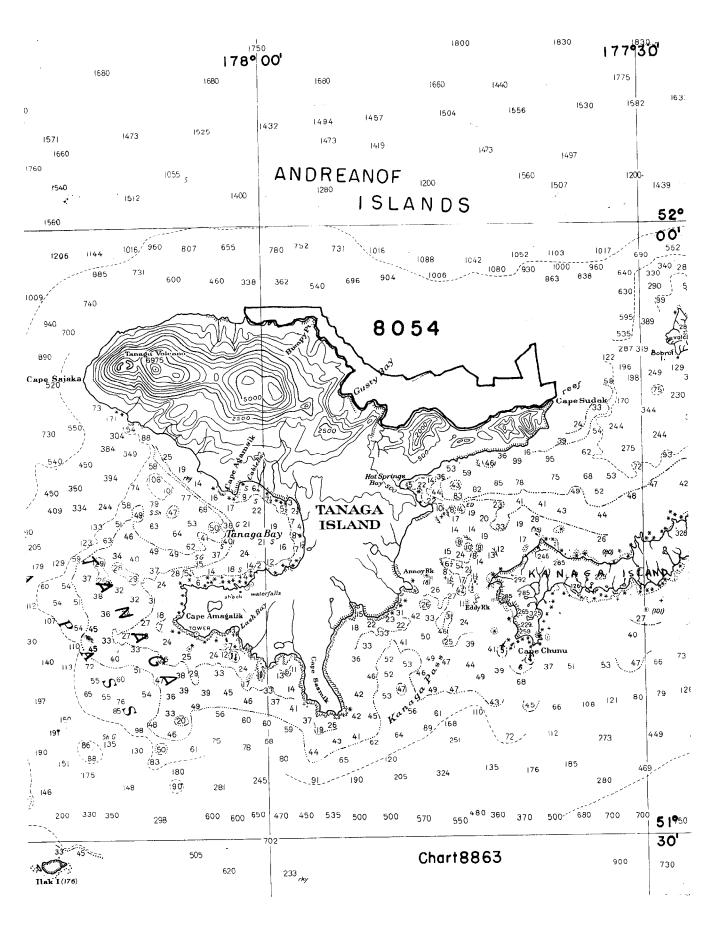
The survey is basic within the limits covered and no additional field work is recommended. The additional lines recommended in the Descriptive Report in depths over 30 fms. at long. 177°38'-39' have been run on the adjoining survey H-8057 (1954) and adequately develop the area.

Examined and Approved:

H. R. Edmonston Chief, Nautical Chart Branch

E. R. McCarthy Chief, Division of Charts

Earl O. Heaton Chief, Division of Coastal Surveys



FORM 719
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Adr. 1950

#### TIDE NOTE FOR HYDROGRAPHIC SHEET

x a yeorough Charteach Amount at Kalk

9 April 1954

Division of Charts:

R. H. Carstens

Plane of reference approved in 9 volumes of sounding records for

HYDROGRAPHIC SHEET

8054

Locality

Tanaga Island, Aleutian Islands

Chief of Party: S. B. Grenell in 1953
Plane of reference is mean lower low water, reading
4.8 ft. on tide staff at Gusty Bay, Tanaga Island
8.8 ft. below B. M.1 (1953)

2.0 ft. on tide staff at Barabara Island 7.2 ft. below BM 1 (1953)

Height of mean high water above plane of reference is as follows: Gusty Bay, Tanaga Island = 3.3 feet

Barabara Island

= 3.1 feet

Condition of records satisfactory except as noted below:

E.C. McKay

Section of Tiday

Chief, Division of Tides and Currents.

# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8054

# Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
9/30/54	9145	J.a. M. Gam	Before Verification and Review (Frey) 1/25/ce
			Completely opplied
Feb'55	9146	HElliae Ewen	Before Verification and Review (Frey) 1/25/55  Completely offlied (Frey)  Before Verification and Review Fully applied  Wenfred offer Life R. 1994
			Wented after V. F. P. 194
11-3-88	9145	Harold Stegman	Before After Verification and Review Tevised Soundings
ì	1		indicated by reviewer - completely applied
8/1/56	8863	Boll time	Before After Verification and Review Hide Cher.
7-01.00	68/5		
F24-38	8863	dr. Wilmann	After Verification and Review
12/30/92	16467	Joseph Robinson	
1-7/9/10	1470/	Lealer Lestinger	Before After Verification and Review
			P. A. C.
			Before After Verification and Review
			Before After Verification and Review
			before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
	•		
	_		
	<u> </u>		

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.