

8077

Diag. Cht. Nos. 8802-3 & 9302

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. PF-1353 Office No. H-8077

LOCALITY

State ALASKA

General locality PRIBILOF ISLANDS

Locality NORTHEAST OF ST. PAUL ISLAND

194 53

CHIEF OF PARTY

K. G. Crosby

LIBRARY & ARCHIVES

DATE FEBRUARY 5, 1954

343

8077
2108

FEB 5 1954

Form 537
(Ed. June 1946)

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-8077

Field No. PF-1353

State Alaska

General locality ~~Bering Sea~~ Pribilof Islands

Locality Northeast of St. Paul Island

Scale 1:10,000 Date of survey July, 1953

Instructions dated 6 March 1951; 21 March 1952; 2 March 1953; 7 April 1953

Vessel PATHFINDER Launches 1, 2 and 3

Chief of party K. G. Crosby

Surveyed by H. D. Nygren, H. P. Demuth, B. E. Greene

Soundings taken by fathometer, graphic recorder, ~~hand lead, voice~~ Launch 1 - - 52s
Launch 2 - - 68s and 74s
Launch 3 - - 46s

Fathograms scaled by G.W. MacDaniels, J.L. Johnson, L.L. Gunter and J.T. Stambaugh

Fathograms checked by R. C. Munson

Protracted by H. D. Nygren

Soundings penciled by H. D. Nygren

Soundings in fathoms ~~100X~~ at ~~MLLW~~ MLLW and are based on a

REMARKS: velocity of sound of 800fm/sec.

Handwritten mark

DESCRIPTIVE REPORT

To Accompany

HYDROGRAPHIC SURVEY H-8077 (Field No. PF-1353)

NORTHEAST OF ST. PAUL ISLAND

PRIBILOF ISLANDS
BERING SEA
ALASKA

Scale 1:10,000

1953

USC&GSS PATHFINDER
Hydrographers

K.G. Crosby, Commanding
H.D. Nygren, H.P. Demuth
B.E. Greene

A. PROJECT

1. Project CS 343, Bering Sea, Alaska
2. Instructions 22/MEK, 6 March 1951
3. Supplemental Instructions, 22/MEK, 21 March 1952
4. Supplemental Instructions, 22/MEK, 2 March 1953
5. Supplemental Instructions, 22/MEK, 7 April 1953

B. SURVEY LIMITS AND DATES

This survey covers the area of a shoal six miles northeast of St. Paul Island in the Pribilof Islands. See Index of Hydrographic Surveys (Sheet Layout) included with this report. It lies between longitudes $169^{\circ} 56' W$ and $170^{\circ} 03' W$, and latitudes $57^{\circ} 16' 30'' N$ and $57^{\circ} 20' 30'' N$.

Field work started on 17 July 1953 and ended on 31 July 1953.

This survey lies within the area of H-7948 (PF-4151), a 1:40,000 scale survey started in 1951. It covers the area of a partial development made on that survey. It adjoins 1953 survey H-8074 (PF-2253) to the south, east, and west, and 1953 survey H-8073 (PF-4253) to the north and northeast.

C. VESSELS AND EQUIPMENT

Hydrography was done with PATHFINDER launches 1, 2 and 3. Launch 1 worked in the northeastern area, launch 2 in the center, and launch 3 in the southwestern part. All launches were based aboard ship. No standard turning radius was established or used. Echo sounding equipment consisted

of 808 type graphic recording fathometers with keel mounted acoustic units. Fathometer numbers were as follows: Launch 1, 52s; Launch 2, 74s and 68s; Launch 3, 46s.

D. TIDE AND CURRENT STATIONS

The tide station used to control this survey was established in Village Cove, St. Paul Island. No time or range corrections were applied to tide reducers.

No current stations were occupied within the area.

E. SMOOTH SHEET

The smooth sheet projection was made by hand in the Seattle processing office. Shoran arcs were drawn through computed geographic positions by the use of standard templates.

Soundings were pencilled on the smooth sheet to tenths of fathoms because of the large scale and flat bottom.

F. CONTROL STATIONS

All control was electronic. Shoran station SHO-NUF was over a marked third order triangulation station established by K. G. Crosby in 1953.

The second shoran station was aboard the ship PATHFINDER, which anchored west of Walrus Island while acting as a floating station. In the records of this survey this ship station is called SHO-BOAT. Two sets of circles referred to this station appear on the boat sheets. One set (labeled SHO-BOAT) originates at a center in the water area west of Walrus Island near the ship anchorage. The other set (labeled SHO-WAL) originates at triangulation station WALRUS ISLAND 2, 1953, on Walrus Island. Both sets were used in boat sheet plotting, as described in section I, CONTROL OF HYDROGRAPHY, however only one set appears on the smooth sheet, as the final position of the sounding launch is derived by correcting the shoran distances to the true ship location, and the final position is the same regardless of the system of plotting used.

A large scale (1:10,000) graphic control survey was made to locate whitewashes on Walrus Island. This survey was made on a small section of Boat sheet paper without a projection, as the final field position of the reference station (WALRUS ISLAND 2, 1953) was not available until the hydrography was completed. The topographic party also located a small marker buoy anchored near the ship anchorage. The position of this buoy at 1640 hours on 16 July was used as the origin of the circles for SHO-BOAT. The ship was located with respect to Walrus Island by sextant angles at regular intervals during progress of the sounding. A simultaneous gyro bearing and a horizontal sextant angle were taken to the buoy. The ship's position was then plotted and the cut to the buoy laid down on the topo sheet. As the buoy was usually somewhat off the 1640 position because of scope, the angle

between the existing position of the buoy and the 1640 position (origin of the circles) was sealed from the sheet and this value was applied to the gyro bearing to give the reverse bearing of the ship from the circle origin. The distance from ship to origin was sealed directly in meters. After the buoy carried away, gyro bearings were taken to shore objects, but the process remained the same. This was necessary because of the absence of a projection on the sheet. Had this been available the azimuth could have been sealed directly. An alternative method involved fixing the position of the ship as before except that the circles originated ashore at WALRUS ISLAND 2, 1953 and the relationship between that station and the ship was determined. This method in principle was less complex, but involved larger corrections to the shoran distances. Both methods were available to the launch hydrographers in the field. The buoy position only was used in smooth sheet plotting.

The position of the ship with respect to both circle origins was broadcast to the launches by radio at hourly intervals. The record of the ship's positions and the topo sheet will be forwarded as a part of the records of H-8074 (PF-2253, 1953). A plot of the ship's position with respect to the buoy position origin is included with this report. Where the movement of the ship between successive positions has been such as to inject a possible error of over 20 meters in the readings of the ship station, an assumed position for intermediate times has been plotted after an examination of the current observations made at the time in question. A tabulation of positions used for computing corrections has been included with this report.

G. SHORELINE AND TOPOGRAPHY

No shoreline or topography fall within the limits of this survey.

H. SOUNDINGS

Soundings were made by 808 graphic recording fathometers on the fathom scale. Sounding intervals were controlled by hydrographic clocks. Instruments were calibrated to 800 fm/sec, and no corrections other than for initial were ordinarily applied. Speed corrections were required in several instances in the work done with fathometer 74s. These were determined by sealing the distances between adjacent fix marks, and computing the correction as a percentage, as noted in the remarks column of the sounding volumes where the correction has been applied. See "FATHOMETER DESCRIPTIVE REPORT-1953 (Ship PATHFINDER)". Bar checks on this survey are recorded in the records of H-8074 (PF-2253).

I. CONTROL OF HYDROGRAPHY

Hydrography was controlled by shoran stations SHO-NUF and SHO-BOAT, located as described in Section F. Launches attempted to run concentric arcs on signals from SHO-NUF. As the signals from station SHO-BOAT originated from the ship and the plotting circles on the sheets did not, it was necessary to apply an eccentric correction to all such recorded distances. The corrections applied to the boat sheet positions differ from those applied

to the smooth sheet because of the greater accuracy of final corrections. An abstract of ship's positions and assumed positions was first made up. The hourly position was used to derive the corrections for the period of half past the previous hour to half past the time of the fix, except where assumed positions were used or where the line turned or broke within a fix or two of the break time. In the first case the break occurred halfway between positions, and in the second the time was extended for several minutes. Ship's positions used are noted in the remarks columns of the sounding volumes in blue pencil at appropriate times.

Smooth sheet corrections were derived graphically by a method which is considered as sufficiently accurate, considering the nature of the control and the magnitude of the corrections. This correction was scaled by the following process: A transparent compass rose was superimposed and oriented over the intersection of a distance arc and any other line (usually a meridian) near the uncorrected position, which was roughly plotted on the cover sheet. An Odessey protractor with a line scribed through its center was then positioned over the compass rose at a distance from the center equal to the displacement of the ship from the circle origin, along the bearing of the displacement. The correction to the distance for that position was then read directly from the Odessey protractor along a radius perpendicular to the distance arc. This was repeated at regular intervals along the sounding line, usually every fifth position, and the corrections for intermediate positions were obtained by pro-rating the difference between adjacent resolved corrections. Positions at which this resolution were made are indicated by a blue cross in the remarks columns of the sounding volumes. At positions which fell in an area of rapid change of correction, and which were not sufficiently close to convenient intersections, the resolution was made at intersections on each side of the position, and the desired correction obtained by simple proportion. In rare cases it was necessary to make more than two resolutions to determine the correction.

Values found by this method have been applied as a second shoran correction in blue pencil in the position data column of the Sounding Volumes. Although not mathematically exact this method produces adequate results rapidly.

Other shoran correction are abstracted with this report, and are discussed in "EPI AND SHORAN DESCRIPTIVE REPORT-1953" ship PATHFINDER.
(see H-8073)

J. ADEQUACY OF SURVEY

This survey is complete and adequate to supercede prior surveys.

Satisfactory junctions are made with adjoining surveys, and depth curves can be adequately drawn at the junctions.

K. CROSSLINES

Approximately 6% crosslines were run. Crossings were satisfactory. No systematic discrepancy was noted. An occasional difference up to 0.5

fathoms was noted on short sections of the crossline run on "d" day (Purple). Where it occurs this could be caused by a slight displacement of the line.

*crossings
adequate*

L. COMPARISON WITH PRIOR SURVEYS

The survey agrees with prior surveys on smaller scales. The shoalest soundings found on H-7948 (1951, 1:40,000) around a least depth of 5.8 fathoms at longitude 169° 59.3' W and latitude 57° 18.7' N occur in an area of similar depths on this survey. The shoalest single sounding found near the old 5.8 fathom depth was 5.8 fathoms in 1953. This is not the least depth on the shoal. Other soundings are in like agreement.

*Lat. 57° 18.78'
Long. 169° 59.00'*

The 9 fathom depth plotted on H-7950 (1951, 1:400,000) near longitude 169° 59' W and latitude 57° 19' N falls near a group of 7, 8 and 9 fathom soundings on this survey. Other adjacent depths are also in agreement.

M. COMPARISON WITH CHART

In general the chart agrees with prior and present surveys. The 9 fathom sounding shown on chart 8994 (1:50,000, 3/9/53) at longitude 169° 59' W and latitude 57° 19.5' N appears to be 30" of latitude too far north to agree with 1953 hydrography.

*see P 6 of
Review.
9fm sdg. de-
leted from
chart.*

N. DANGERS AND SHOALS

The shoals as charted in this area are substantially correct with one principle exception. A least depth of 2.7 fathoms was found on position 65d (purple) among slightly deeper soundings. The limits of this shoal are adequately defined. The least depth is based on an interpretation of the fathogram. Considerable time was spent by the hydrographic party in an attempt to verify this depth with a hand lead, however rough seas and a very strong current prevented a satisfactory check. (see Sounding Volumes; No. 6) The shoal was not visible. This sounding is located at longitude 169° 59' 17" and latitude 57° 18' 25". Shoal soundings extend from this point one half mile in a northeasterly direction.

O. COAST PILOT INFORMATION

There is no detailed information particularly applicable to this survey. See "Coast PILOT NOTES-1953", (Ship PATHFINDER).

As stated previously the ship anchored west of Walrus Island in the area of H-8074 (PF-2253) while work was in progress.

P. AIDS TO NAVIGATION

None

Q. LANDMARKS FOR CHARTS

None

R. GEOGRAPHIC NAMES

The name BERING SEA is the only one applied to the smooth sheet.

Z. TABULATION OF APPLICABLE DATA

NAME	DATE FORWARDED	
1. EPI and SHORAN DESCRIPTIVE REPORT 1953	10 Dec 1953	H-8073
2. FATHOMETER DESCRIPTIVE REPORT 1953	10 Dec 1953	H-8073
3. COAST PILOT NOTES 1953	Nov 1953	
4. TRIANGULATION DATA, ST. PAUL ISLAND 1953	10 Nov 1953	
5. CURRENT RECORDS 1953)	With records of H-8074 (PF-2253)	
6. SHIP AND BUOY POSITIONS)		
7. TOPOGRAPHIC SHEET PF-D-53)		
8. TIDAL DATA, ST. PAUL ISLAND 1953	3 Aug, 13 Oct, 21 Oct '53	
9. BATHYTHERMOGRAPH OBSERVATIONS 1953)	For transmittal to H.O. 13 Nov 1953	
10. OCEANOGRAPHIC OBSERVATIONS 1953)		

Respectfully submitted,

Harley Nygren
HARLEY NYGREN
LT., USC&GS

Approved and forwarded:

K. G. Crosby
K. G. CROSBY
CAPT., USC&GS
Comdg. Ship PATHFINDER

Abstract of Ship Locations (SHO-BOAT)

Hydrographic Survey H-8077(PF-1353)

Ship PATHFINDER

CS 343

The following values were abstracted from the notations of Ship's positions radioed to the launches and entered in the Sounding Volumes.

<u>Date 1953</u>	<u>Time</u>	<u>Bearing of Ship From Origin of Circles (1640 Buoy Pos.)</u>	<u>Distance Meters</u>	<u>Distance Stat. Miles</u>
17 July	0900	261	279	0.173
	1000	261	274	0.170
	1100	259	270	0.168
	1200	257	280	0.174
	1300	252	270	0.168
	1400	252	308	0.191
	1500	252	311	0.193
	1600	250	310	0.193
18 July	0900	261	266	0.165
	1000	261	280	0.174
	1100	262	270	0.168
	1200	257	265	0.165
	1300	256	270	0.168
	1400	249	280	0.174
	1500	251	292	0.181
	1530 (Assumed)	251	313	0.194
	1600	251	335	0.208
	1700	250	340	0.211
	19 July	0800	266	285
0900		266	282	0.175
1000		265	278	0.173
1100		262	270	0.168
1200		261	260	0.162
1300		259	250	0.155
1400		256	250	0.155
1430 (Assumed)		252	265	0.165
1500		249	280	0.174
1530 (Assumed)		246	312	0.194
1600		244	345	0.214
1700	244	375	0.233	

(continued on next page)

Abstract of Ship Locations (SHO-BOAT)
 Hydrographic Survey H-8077(PF-1353)
 Ship PATHFINDER CS 343

(Continued from previous page)

<u>Date 1953</u>	<u>Time</u>	<u>Bearing of Ship From Origin of Circles (1640 Buoy Pos.)</u>	<u>Distance Meters</u>	<u>Distance Stat. Miles</u>
31 July	0800	245	80	0.050
	0900	234	60	0.037
	1000	232	60	0.037
	1100	211	77	0.048
	1130 (Assumed)	210	113	0.070
	1200	210	150	0.093
	1300	213	178	0.111
	1400	220	173	0.107
	1500	218	180	0.112
	1600	219	180	0.112
	1630 (Assumed)	225	146	0.090
	1700	234	115	0.071

Abstract of Fathometer Corrections
Hydrographic Survey H-8077 (PF-1353)

Ship PATHFINDER

CS 343

<u>Launch No.</u>	<u>Day Letter</u>	<u>Fath. No.</u>	<u>A scale Correction, Fath.</u>
1	a,b (green)	52s	0.3
2	a,b (blue)	74s	-0.1
2	c (blue)	68s	0.2
3	a,b,c,d (purple)	46s	0.2

Speed corrections were occasionally necessary for Fathometer 74s as described in the Sounding Volumes.

Abstract of Shoran Corrections
 Hydrographic Survey H-8077(PF-1353)

Ship PATHFINDER

CS 343

<u>Launch</u>	<u>Day</u>	<u>Station</u>	<u>Correction Stat. Miles</u>
1	a (green)	BOAT NUF	0.001 -0.018
1	b (green)	BOAT NUF	-0.001 -0.019
2	a (blue)	BOAT NUF	0.011 0.008
2	b (blue)	BOAT NUF	0.013 0.010
2	c (blue)	BOAT NUF	0.013 0.010
3	a (purple)	BOAT NUF	0.014 -0.002
	b (purple)	BOAT NUF	0.014 -0.005
	c (purple)	BOAT NUF	0.015 -0.007
	d (purple)	BOAT NUF	0.011 -0.005

Statistics for Hydrographic Survey H-8077
 Field Number PF-1353
 Ship PATHFINDER
 CS 343

<u>Vol. No.</u>	<u>Launch</u>	<u>Day</u>	<u>July Date</u>	<u>No. of Wire or H.L. Sdgs.</u>	<u>Pos.</u>	<u>Stat. Miles Sdg. Lines</u>
I	1	a green	18	0	104	22.2
I	1	b green	19	0	81	16.7
II	2	a blue	17	0	130	33.9
II	2	b blue	18	0	163	42.3
III	2	c blue	19	0	107	24.6
IV	3	a purple	17	0	71	11.6
IV	3	b purple	18	0	89	21.5
V	3	c purple	19	0	137	27.6
VI	3	d purple	31	4	75	13.0
Total				4	957	213.4

Total Square Statute Miles 8.7

TIDE NOTE

HYDROGRAPHIC SURVEY H-8077 (Field No. PF-1353)

Ship PATHFINDER, CS 343

1953

Records from the Portable Automatic Tide Gage maintained at Village Cove, St. Paul Island, Alaska, Latitude $57^{\circ} 07.5' N$, Longitude $170^{\circ} 16.5' W$, during the period of the field work were used for the reduction of soundings for tide.

3.4 Feet on the staff corresponds to MLLW in 1953.

Hourly heights for the reduction of soundings were scaled from the marigrams in the field.

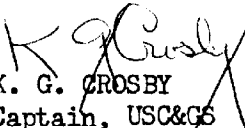
Tidal Data from this gage was used for the entire survey without application of corrections for time or height differences.

APPROVAL SHEET

During the progress of this survey each boat sheet of the three launch parties engaged in this work was examined for completeness at the end of each days work.

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

The survey is approved.


K. G. CROSBY
Captain, USC&GS
Chief of Party

839

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. Apr. 1950

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys:~~

2 March 1954

Division of Charts: R. H. Carstens

Plane of reference approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET

8077

Locality Pribilof Islands, Bering Sea

Chief of Party: K. G. Crosby in 1953

Plane of reference is mean lower low water, reading
3.4 ft. on tide staff at Village Cove, St. Paul Island
9.5 ft. below B. M. 2 (1946)

Height of mean high water above plane of reference is 3.0 feet.

Condition of records satisfactory except as noted below:

E. C. McKay
Section of Tides

Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No. H-8077

Name on Survey											
	A	B	C	D	E	F	G	H	K		
Alaska											1
Pribilof Islands											2
St. Paul Island											3
											4
Bering Sea											5
											6
											7
											8
											9
											10
											11
Village Cove											12
											13
											14
											15
											16
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											21
											22
											23
											24
											25
											26
											27

} for title

B67

B67

Names approved
2-25-57
L. FECK

(tide station)

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8077....

Records accompanying survey:

Boat sheets ..3..; sounding vols. .6...; wire drag vols.; bomb vols.; graphic recorder rolls 3 Env; special reports, etc. 1 Smooth Sheet; 1 Descriptive Report; 1 Cahier.. Positions of SHO-BOAT:.....

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

Number of positions on sheet	.....	957	
Number of positions checked	.....	27	81
Number of positions revised	.....	0	2
Number of soundings revised (refers to depth only)	.....	*	0
Number of soundings erroneously spaced	.....	15	23
Number of signals erroneously plotted or transferred	.....	0	0
Topographic details	Time	.....	0
Junctions	Time	.....	0
Verification of soundings from graphic record	Time	.....	20 16

Preliminary Verification by *Jim Reskind* Total time 65 Date 4-29-54
 Verified & inked by *Eric Spengler* 120 Date 10-26-55
 Reviewed by *Jim Reskind* Time 18 Date 4-30-54
Addendum *Eric Spengler* 32 Date 6-8-56

* A considerable number of soundings were revised during verification because speed corrections where necessary were not applied to depths obtained by fathometers on all sections of lines where necessary. Some sections of lines were adequately revised during field plotting.

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

REGISTRY NO. H-8077

FIELD NO. PF-1353

Alaska, Pribilof Islands, Northeast of St. Paul Island

Project No. CS-343

Surveyed - July 1953

Scale 1:10,000

Soundings:

Control:

808 Fathometer

Shoran

Chief of Party - K. G. Crosby
Surveyed by - H. D. Nygren, H. P. Demuth, B. E. Greene
Protracted by - H. D. Nygren
Soundings plotted by - H. D. Nygren
Preliminary Verification by - I. M. Zeskind
Verified and inked by - *G.A. Kozemczak*
Reviewed by - I. M. Zeskind 5/6/54
Inspected by - R. H. Carstens

1. Shoreline and Control

No shoreline is shown on this offshore survey.

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 are adequately delineated.

This is a survey of a shoal and its surrounding area which lies northeast of St. Paul Island in the Pribilof Islands, Alaska. The bottom is generally smooth, except on the shoal where ridges and mounds contribute to the irregularity of the bottom.

4. Junctions with Contemporary Surveys

The present survey falls within the area of H-7948 (1951-52-53) and joins H-8073 (1953) on the north and northwest, and H-8074 (1953) on the southwest, south and east. The junctions of these surveys with the present survey will be considered in the reviews of H-7948, H-8073 and H-8074.

5. Comparison with Prior Surveys

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

6. Comparison with Drawing No. 4, dated 4/6/54, of Chart 8994

A. Hydrography

The charted hydrography originates principally with advance information of surveys H-7948 (1951) and H-7950 (1951-53) supplemented by critical soundings from the present survey prior to verification and review. Only minor differences in depths and depth curves are noted.

Hydrography from the present and overlapping contemporary surveys supersedes the charted hydrography.

B. Aids to Navigation

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

7. Condition of Survey

- a. This survey has only been given a preliminary verification. A complete statement concerning the condition of the survey is deferred until the present survey has been completely verified.
- b. Although the field party corrected some sections of sounding lines due to speed variations of the fathometer, it was necessary to revise additional sections of sounding lines for speed corrections during the preliminary verification of the present survey.

8. Compliance with Project Instructions

The present survey adequately complies with the Project Instructions.

9. Additional Field Work Recommended

This is an excellent basic survey and no additional field work is recommended.

Examined and Approved:

Wallace A. Bruder
Wallace A. Bruder
Acting Chief, Nautical Chart Branch

H. Arnold Karo
H. Arnold Karo
Chief, Division of Charts

G. R. Fish
G. R. Fish
Chief, Section of Hydrography

Earl O. Heaton
Earl O. Heaton
Chief, Division of Coastal Surveys

Addendum to Review

H-8077 (1953)

Verified and inked by - G. A. Kozemczak
Review Addendum by - I. M. Zeskind 6/8/56
Inspected by - R. H. Carstens

The verification of this survey has been completed. Soundings and depth curves have been completely inked and the junctional soundings added from verified surveys. The junction with H-8074 (1953) on the southwest, south and east will be considered in the review of that survey.

Comparison with Chart 8994 (latest print date 6-21-54)

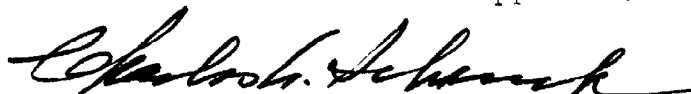
The charted hydrography originates principally with advance information of surveys H-7948 (1951) and H-7950 (1951-53), supplemented by critical soundings from the present survey after preliminary verification and review. Only minor differences in depths and depth curves are noted.

Hydrography from the present survey and overlapping contemporary surveys supersedes the charted hydrography.

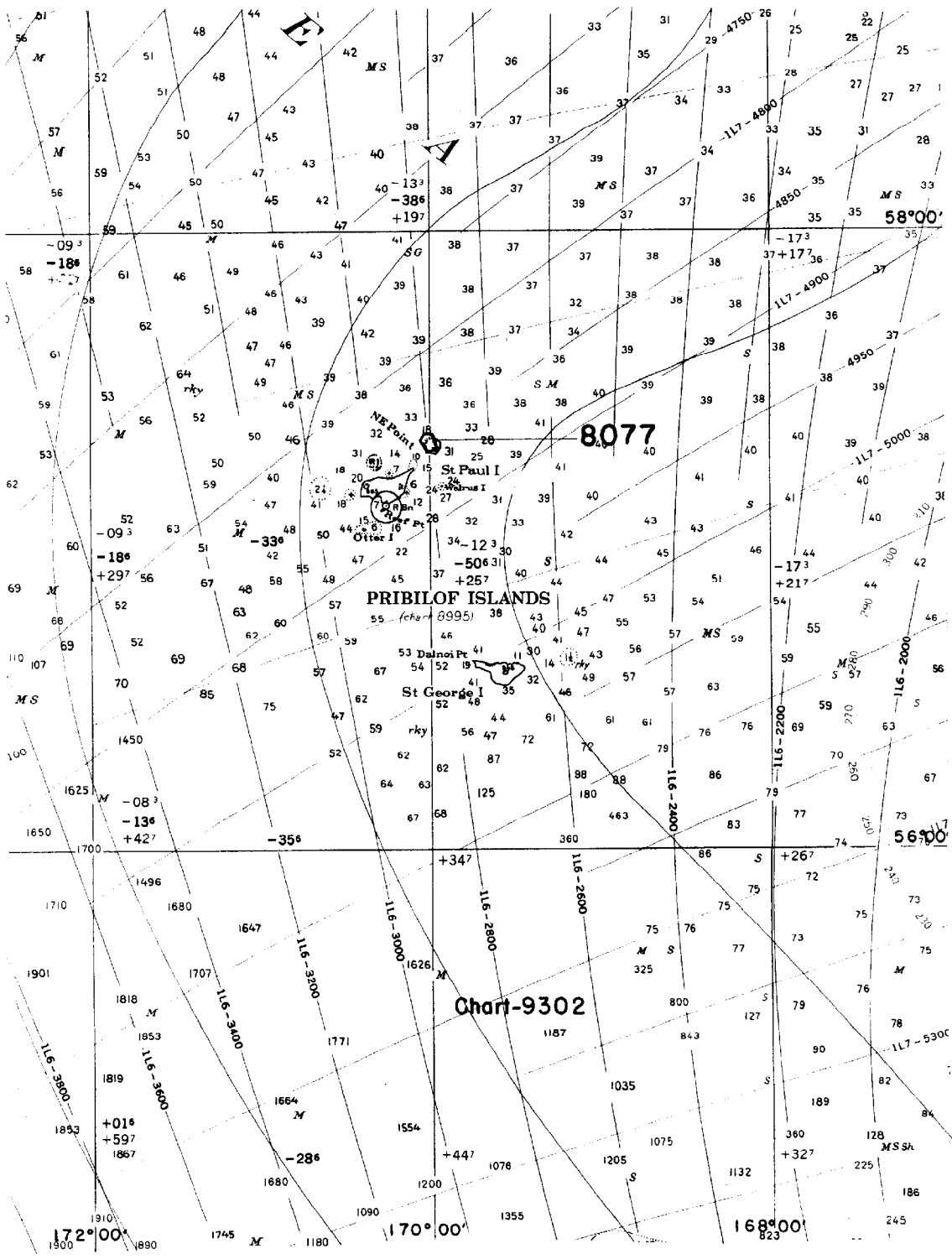
Condition of Survey

- (a) Completion of verification and inking reveals that the smooth plotting was well done, except as noted in paragraph 7b of the review.
- (b) The Descriptive Report is complete and comprehensive.

Approved:



Acting Chief
Chart Division



NAUTICAL CHARTS BRANCH

SURVEY NO. # 8077

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
4/5/54	8994	Everett	Before ^{Partial} After Verification and Review Partially applied
7 Nov. 54	8995	C.R.W.	Before After Verification and Review
4-10-59	8994	R.H. De Foulk	Before After Verification and Review
2 Jan 61	8995	T. Nichols	Before After Verification and Review <i>Chart 8994</i>
10 Jan 61	880V	"	Before After Verification and Review <i>Thru 8995</i>
"	930V	"	Before After Verification and Review <i>Thru 880V</i>
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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.

