8072

Diag. Cht. No. 8802-3

PS-343

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. PF-8153 *Office No.* H-8072

LOCALITY

State Alaska

General locality Pribilof Islands

Locality Northwest of St. Paul Island

1953

CHIEF OF PARTY

K. G. Crosby

LIBRARY & ARCHIVES

DATE March 16 - 1954

8-1870-1 (1)

8072

8072

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-8072

Field No. PF-8153

State Alaska

General locality Pribilof Islands

Locality Northwest of St. Paul Island

Scale 1:100,000 Date of survey 11 Aug 1953 - 27 Aug 1953

Instructions dated 6 Mar 1951, 21 Mar 1952, 2 Mar 1953, 7 Apr 1953

Vessel USC&GSS PATHFINDER

Chief of party K. G. Crosby

Surveyed by M. E. Wennermark, W. F. Deane, H. D. Nygren, H. P. Demuth

Soundings taken by fathometer, graphic recorder, ~~hand lead or pole~~ 130-S 808 Type, Edo UQN-1B

Fathograms read by J. T. Stanbaugh, J. L. Johnson, G. W. McDaniel

Fathograms checked by L. R. Whitney, R. C. Munson, L. C. Larson, W. F. Glover

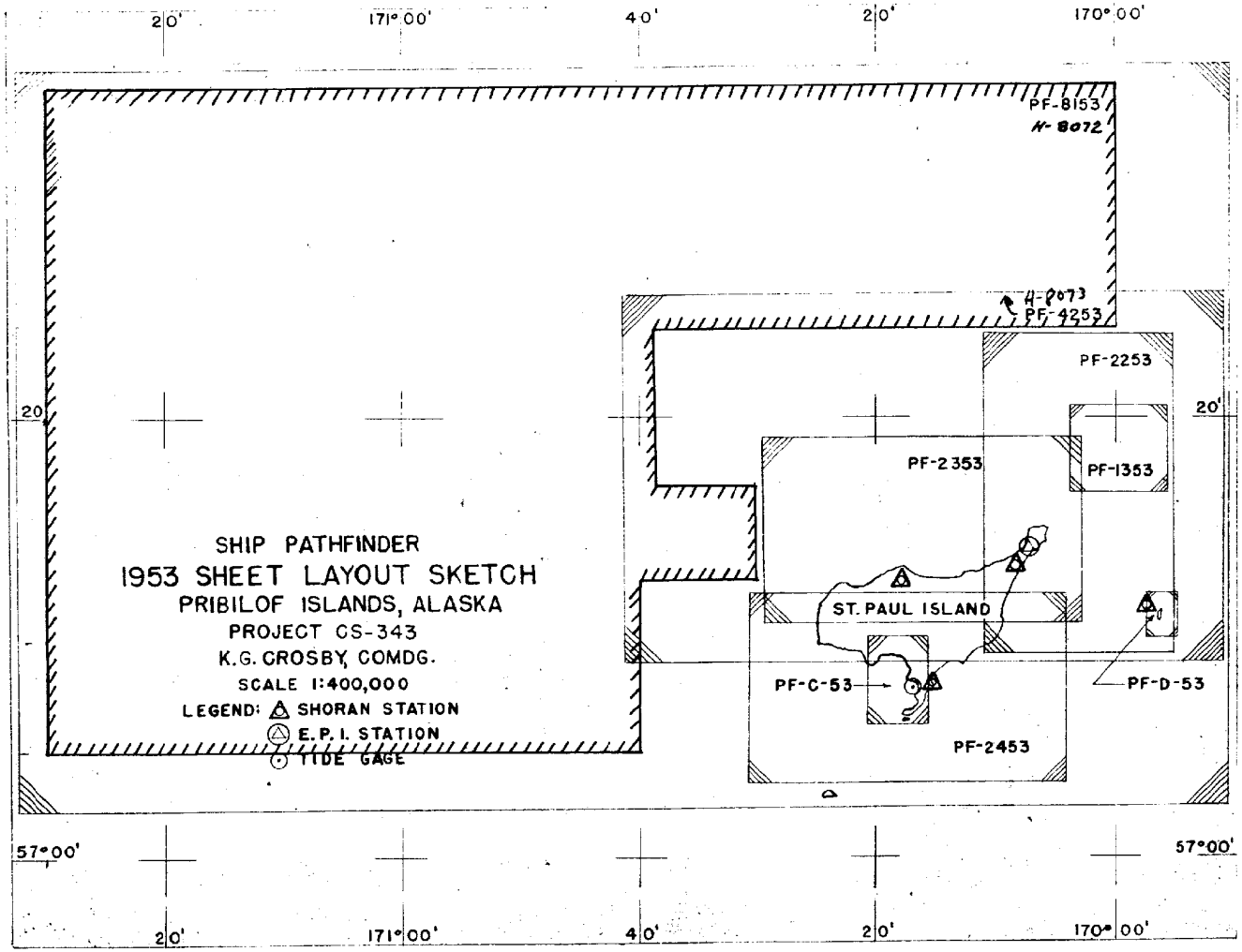
Protracted by L. R. Whitney

Soundings penciled by L. R. Whitney

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

REMARKS: velocity of sound of 800 fms/sec.

U. S. GOVERNMENT PRINTING OFFICE 777032


20'
171° 00'
40'
20'
170° 00'
PF-8153
H-8072
H-8073
PF-4253
PF-2253
PF-2353
PF-1353
20'
SHIP PATHFINDER
1953 SHEET LAYOUT SKETCH
PRIBILOF ISLANDS, ALASKA
PROJECT CS-343
K.G. CROSBY, COMDG.
SCALE 1:400,000
LEGEND: SHORAN STATION
E.P.I. STATION
TIDE GAGE
ST. PAUL ISLAND
PF-C-53
PF-D-53
PF-2453
57° 00'
20'
171° 00'
40'
20'
170° 00'
57° 00'

DESCRIPTIVE REPORT

To Accompany

HYDROGRAPHIC SURVEY H-8072 (Field No. PF-8153)

ST. PAUL ISLAND, ALASKA

SCALE 1:100,000

1953

USC&GSS PATHFINDER — K. G. CROSBY, Chief of Party

HYDROGRAPHERS — M. E. WENNERMARK
W. F. DEANE
H. D. NYGREN
H. P. DEMUTH

A. PROJECT

1. Project CS-343, Bering Sea, Alaska.

2. Instructions 22/MEK, dated 6 March 1951.

3. Supplemental Instructions 22/MEK, dated 21 March 1952, 2 March 1953 and 7 April 1953.

B. SURVEY, LIMITS AND DATES

1. This survey comprises a complete offshore survey northward and westward of St. Paul Island within the limits specified below. (See Sheet Layout sketch which is included in this report). The area surveyed lies between latitudes 57°05' and 57°35' and between longitude 171°30' and approximate longitude 170°40', thence eastward between latitudes 57°24' and 57°35' to approximate longitude 170°00'.

2. Field work was done on 14 days, between 11 August and 27 August 1953. Work was prevented by weather for part of one day.

3. Junction made with prior surveys:

a. H-7948, 1951 and 1952, scale 1:40,000 (partial). on S.E.

b. H-8073, 1953, scale 1:40,000. on E. (N. of St Paul I.

c. H-7951, 1953, scale 1:500,000 (PIONEER). on E

d H-7949 (1951-52) " 1:500,000 on N.E

~~This survey was joined on the south by (b) and (e), on the west by (c), on the north between longitudes 171-00' and 171-30' by (c), the rest of~~

e H-7950 (1951-53) scale 1:500,000 on N.

~~the north side and~~ The ~~east~~ west side of the survey is bounded by unsurveyed waters. A small area in the vicinity of the shoal discussed in Section J, paragraph 3, below, joins with (a).

C. VESSEL AND EQUIPMENT

1. All sounding was done by the Ship PATHFINDER. No uniform turning radius was used. The speed was maintained at approximately 12.5 knots throughout the greater portion of the survey.

2. The fathometer used was the 808-type No. 130-S. During periods of changing the graphic record the EDO UQN-1B was used. The general depths of this survey was 30 to 60 fathoms.

D. TIDE AND CURRENT STATIONS

1. As a reference station for the reduction of soundings a portable automatic tide gage was maintained at Village Cove, St. Paul Island, at latitude 57-07.5' and longitude 170-16.7' throughout the period of hydrography. This gage was out of commission on 11, 12, 13 and 21 August. Tides for these days were derived from the standard tide gage at Dutch Harbor. Hourly heights were furnished by the Washington Office in Director's letter dated 13 October 1953, reference No. 36-rjb. Time and range ratios have been applied.

2. No current stations were occupied.

E. SMOOTH SHEET

1. The smooth sheet projection was constructed in the Seattle Processing Office by hand and by conventional methods. The scale of the smooth sheet was reduced to 1:100,000, the boat sheet being 1:80,000. The area covered is the same for both smooth and boat sheets. No shoreline or topographic signals were required to be transferred to this sheet.

F. CONTROL STATIONS

1. The previous control established in 1897, 1944, and 1951 was supplemented by additional triangulation this year. All control was reduced to the North American 1927 Datum.

2. To control hydrography the radio transmitting antennas of the EPI and shoran stations were located by triangulation. The EPI station on Nunivak Island, designated as "NUNI" for the 1953 hydrography, is identical with EPI station DOG located by LCDR Tonkel in 1951. The geographic position used for the 1953 control is an adjustment applied to the original computed position and furnished this field party by the Commanding Officer, Ship PIONEER when the EPI station was placed in operation in July 1953. The NA 1927 datum geographic position used is latitude 60°03' 30.794", longitude 167°14' 21.551". EPI PAUL-1953 and shoran station NUF-1953 was located by Capt. K. G. Crosby. Shoran station FAIR-1951 was established and located by Capt. Charles Pierce.

G. SHORELINE AND TOPOGRAPHY

1. The area surveyed is comprised entirely of off-shore hydrography, therefore no shoreline, low water line, or topographic details are included on this sheet.

H. SOUNDINGS

1. Soundings were obtained by electronic echo sounding equipment using the 808 type fathometer No. 130-S and the Edo fathometer (type UQN-1B). The latter was used when it became necessary to change the fathogram on the 808 type equipment or as a standby when operational repairs were required. Fathograms are legible and complete. Fathometer soundings were compared at various times throughout the work with vertical wire casts.

2. Methods for obtaining the fathometer corrections, comprising index, phase, draft, squat etc., did not deviate from standard procedures and are discussed in the 1953 "Report on Fathometer Corrections" that has been transmitted under separate cover. *Filed with H-8073*

3. Fathometer corrections comprised of those mentioned in paragraph 2 were of normal, average values. On "H" day it was necessary to apply a fathometer speed correction for depths between position 6-35 inclusive, to account for a fluctuation of fathometer speed.

4. All fathometer corrections were computed and checked. They were then entered in the sounding record and again checked for correct transcribing.

I. CONTROL OF HYDROGRAPHY

1. Electronic control was used exclusively by the PATHFINDER during this work. The horizontal control was furnished principally by EPI, but in addition Shoran control was used to strengthen fixes in areas inside the 300 micro-second distance circle of EPI-PAUL 1953. This practice was in conformity with recommendations in EPI Manual, S.P. No. 265, that EPI not be used closer than 25 nautical miles to the shore station.

2. In the area between latitudes 57-24' and 57-35', and between longitudes 170-02' and 170-35', SHO-NUF 1953 was used together with EPI-NUNI 1951 for the position fix. EPI-PAUL1953 was recorded but served only as a check. In the area between latitudes 57-07' and 57-18', and between longitudes 170-31' and 171-05', SHO-FAIR 1951 was used together with EPI-NUNI 1951 for the position fix. EPI-PAUL 1953 was recorded but served only for a check. All other areas of the survey are controlled by EPI alone.

3. A small area bounded by latitude 57-23' to 57-35' and longitude 170-00' to 170-10' falls along the baseline between EPI-PAUL, SHO-NUF and EPI-NUNI. Consequently, the control is weak and many of the positions were smooth plotted on one arc, time and course.

4. In the two areas discussed in paragraph 2 above, a shift in the plotted position resulted when SHO-NUF or SHO-FAIR was used in place of EPI-PAUL. In general this shift approximated 150 - 200 meters in the direction away from the shoran station; that is, in the northeast section of the sheet the positions shifted to the northwest or north when plotting on the arc SHO-NUF, and in the area west of St. Paul Island the positions shifted in a generally westerly direction when plotting on the arc SHO-FAIR. The shift was more consistant in the latter instance.

shift in pos. of fixes of no importance because of smooth bottom and small scale of survey.

5. Methods of obtaining the EPI and Shoran corrections are covered in the 1953 Report on EPI and Shoran Corrections. Report with H-8073

6. EPI and Shoran corrections applying to this sheet are as follows:

DAY	EPI-PAUL	EPI-NUNI	SHO-NUF	SHO-FAIR
A	-8.3	-6.7	+0.014	0.000
B	"	"	"	"
C	"	"	"	"
D	"	"	"	"
E	"	"	"	"
F	"	"	"	"
G	"	"	Pos. 1-47 +0.014	"
			Pos. 47 -End -0.017	"
H	"	"	-0.017	"
J	"	"	"	"
K	"	"	"	"
L	"	"	"	-0.010
M	"	"	"	"
N	"	"	"	"
P	"	"	"	"

J. ADEQUACY OF SURVEY

1. Within the limits of the hydrography on this sheet the survey is considered adequate for charting purposes and can supersede previous surveys in the area. Junctions with adjoining sheets are satisfactory and depth curves can be adequately drawn in these contiguous areas.

2. When surveys are resumed to the eastward of the area discussed in section I, paragraph 3 above, it is recommended that this survey be overlapped by a considerable amount, 3 to 5 miles, to insure a satisfactory junction. This is considered desirable to eliminate any doubt as to a reliability of the work in this area because of the weak control.

3. Two cuts were taken to breakers on the submerged rock in the vicinity of latitude 57°-10.5', longitude 170°38.7' while the ship was engaged in sounding in the general area. These cuts do not accurately verify the position of this shoal as determined in 1952. When surveys are resumed in the area, probably in 1954, it is recommended that this location be verified, provided that shoran stations are suitably located

Area covered on H-7948 (1951-53)

for the purpose. Reference: Descriptive Report for sheet H-7948 (1952), section I, paragraph 4, for discussion of the method used for the location and development of this shoal.

K. CROSSLINES

1. Approximately 10% of the total lines run were crosslines.

2. All crossings resulting from this survey were satisfactory except as noted. Between Position 75-77A and Position 92-102G there is a difference of 1 to 2 fathoms in 30 to 38 fathoms of water. Being a relative smooth bottom, the discrepancy may be due to weakness in horizontal control in this area (refer paragraph 2, section I); to the use of two different fathometers namely 808-type on "A" day, and EDO on "G" day; or the "rounding off" of fractions of fathoms when plotting soundings in even fathoms.

Depths adjusted during verification.

3. Crossing of previous surveys are satisfactory.

L. COMPARISONS WITH PRIOR SURVEYS

1. Comparisons of soundings with the following surveys was made and found to be in agreement.

a.	H-7951	1:500,000	1953
b.	H-7950	1:400,000	1951
c.	H-7951	1:400,000	1951
d.	H-7948	1:40,000 & 10,000	1952
e.	H-8073	1:40,000	1953

See IP 5 of Review.

M. COMPARISON WITH CHART

Comparison with Chart 8995 scale 1:200,000 dated 4/6/53 with this survey was made. The following discrepancies are between Chart 8995 and the present survey.

LOCATION		CHART 8995	PRESENT SURVEY H-8072
Lat. N	Long. W	fms.	fms.
57-29.5	170-10.0	33	37
57-27.9	170-21.9	30	37
57-33.4	170-33.5	36	41
57-24.2	171-18.3	50	52
57-26.4	171-09.2	61	50
57-19.5	171-15.3	64	52
57-08.0	171-00.0	75	50
57-10.5	170-59.5	62	49
57-16.2	170-53.5	50	47
57-14.0	170-33.2	18	34

See IP 6 of Review

Item 4 of Preliminary Review of Chart 8995 states that a tube sounding obtained by a Coast Guard cutter as reported in Chart Letter 352 (1923) was 22 fathoms at position Lat. 57-32.0' and Long. 170-50.0. This survey found a ~~constant~~ depth of 45 fathoms at the location and surrounding vicinity.

Considered disproved. Remove 22 fm depth from chart.

It is recommended that the depths found by survey H-8072 be considered as superseding present charted depths in the area of completed hydrography except the charted 18 fathom sounding at latitude 57° 14.0', longitude 170° 33.2'.

Considered disproved. Remove 18 fm depth from chart. See TR 6 of Review.

N. DANGERS AND SHOALS

No new dangers or shoals were found by this survey. The shoal discussed in paragraph 3 of Section J of this report was approached with sounding lines but no attempt was made to obtain a least depth reading and location. In the area of general depths of 45 fathoms a shoal with least depth of 30 fathoms (Lat. 57-13.7; Long. 170-53.5) was developed by the ship.

O. COAST PILOT

See "Coast Pilot Notes - 1953" (Ship PATHFINDER)

P. AIDS TO NAVIGATION

None

Q. LANDMARKS FOR CHARTS

None

R. GEOGRAPHIC NAMES

The name BERING SEA is the only one applied to the surveyed area.

Z. TABULATION OF APPLICABLE DATA

	NAME	DATE FORWARDED
1.	EPI and Shoran Descriptive Report 1953	10 Dec 1953 Filed H-8073
2.	Fathometer Descriptive Report 1953	10 Dec 1953 "
3.	Coast Pilot Notes 1953	Nov 1953
4.	Triangulation Data, St. Paul Island 1953	10 Nov 1953
5.	Tidal Data, St. Paul Island 1953	3 Aug, 13 Oct, 21 Oct 1953
6.	Bathythermograph Observations 1953)	
7.	Oceanographic Observations 1953)	for transmittal to H.O. 13 Nov 1953

Respectfully submitted,

Lawrence R. Whitney

LAWRENCE R. WHITNEY
Ensign, USC&GS

Approved and Forwarded:

K. G. Crosby

K. G. CROSBY
Captain, USC&GS
Comd'g. Ship PATHFINDER

TIDE NOTE

HYDROGRAPHIC SURVEY H-8072 (FIELD NO. PF-8153)

SHIP PATHFINDER CS-343

1953

Records from the Portable Automatic Tide Gage maintained at Village Cove, St. Paul Island, Alaska (Lat. 57-07.5'N; Long. 170-16.5'W) during the period of the field work were used for the reduction of soundings for tide. MLLW on the tide staff corresponds to a reading of 3.4 feet thru 16 Aug 1953, then a reading of 3.1 feet for the remaining period of work.

In addition to the above, tide records for the Dutch Harbor Standard Tide Gage furnished tide data for 11, 12, 13 and 21 Aug 1953 during the period of time that St. Paul Island gage was out of commission. A time difference of plus 20 minutes and a range factor of 0.9 was used to reduce these tides for use at St. Paul Island. MLLW on the tide staff (Dutch Harbor) corresponds to a reading of 3.3 feet.

Hourly heights for the reduction of soundings were scaled from the marigrams in the field, except for those referenced to Dutch Harbor which were furnished by the Washington Office.

STATISTICS FOR HYDROGRAPHIC SURVEY H-8072

FIELD NO. PF-8153

SHIP PATHFINDER CS-343

VOL.	AUG DAY	NO. OF WIRE OR H.L. SDGS.	AUG DATE	POS.	STAT. MILES SDGS. LINES
I	A(red)	0	11	84	176.0
I,II	B	0	12	147	286.6
II,III	C	1	13	93	204.1
~~IV~~ III	D	1	17	80	167.9
IV,V	E	2	18	147	328.1
V,VI	F	3	19	144	321.5
VI,VII	G	1	20	141	280.1
VII,VIII	H	1	21	144	308.8
VIII,IX	J	1	22	144	211.6
IX	K	0	23	31	55.8
IX,X	L	1	24	75	170.8
X,XI	M	3	25	145	332.7
XI,XII	N	1	26	144	333.5
XII	P	1	27	49	116.8
	TOTAL	16		1568	3294.3

AREA OF HYDROGRAPHY COMPLETED 1139.0 SQ. MILES (NAUTICAL)

1503.5 SQ. MILES (STATUTE)

APPROVAL SHEET

During the progress of this survey the boat sheet was examined at various times throughout each day's work for completeness.

This survey is complete and adequate and no additional field work is recommended, except as noted in paragraph 2, Section J, of the Descriptive Report.

The survey is approved.

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

GEOGRAPHIC NAMES

Survey No. H-8072

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	
Alaska										1
Bering Sea									B.S.	2
Pribilof Islands									4	3
										4
St. Paul Island										5
										6
										7
										8
				Names approved 8-7-54. L Heck						9
										10
										11
										12
										13
Village Cove			(tide station)							14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8072

Records accompanying survey:

Boat sheets 1; sounding vols. 12; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 4 Env;

special reports, etc. 1 Smooth Sheet; 1 Descriptive Report; 1 Cahier-68 Sheets Plotting Abstracts;

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

Number of positions on sheet		1568 — 1568
Number of positions checked		18 — 212
Number of positions revised		0 — 2
Number of soundings revised (refers to depth only)		32 — 0
Number of soundings erroneously spaced		0 — 36
Number of signals erroneously plotted or transferred		0 — ✓
Topographic details	Time	0 — ✓
Junctions	Time	0 — ✓
Verification of soundings from graphic record	Time	5 — 8

Preliminary Verif. by - I. M. Zeskind 2.5 5-17-54

Verification by J. L. Blumkin ....Total time 108.. Date 10-21-55

Reviewed by I. M. Zeskind ..... Time 29... Date 5-20-54

Addendum I. M. Zeskind 24 6-13-56

M-2232-1

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8072 FIELD NO. PF-8153

Alaska, Pribilof Islands, Northwest of St. Paul Island

Project CS-343

Surveyed - August, 1953 Scale 1:100,000

Soundings: Control:

808 Fathometer E.P.I.
Edo Fathometer Shoran

Chief of Party - K. G. Crosby
Surveyed by - M. E. Wennermark, W. F. Deane, H. D. Nygren, and H. P. Demuth
Protracted by - L. R. Whitney
Soundings plotted by - L. R. Whitney
Preliminary Verification by - I. M. Zeskind
Verified and inked by - J.C. Chambers
Reviewed by - I. M. Zeskind 5/20/54
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 an offshore survey with inshore limits extending from 3 to 10 miles west and north of St. Paul Island. The bottom is generally smooth, except in the vicinity of lat. 57°14.0', long. 170°54.0', where a shoal with a least depth of 30-fms rises from surrounding depths of 40-48 fms.

4. Junctions with Contemporary Surveys

The junctions with H-7949 (1951-52) on the northeast, with H-8073 (1953) and H-7951 (1951-52) on the east, with H-7948 (1951-52-53) on the southeast and with H-7950 (1951-53) on the north will be considered in the reviews of those surveys.

The project surveys on the south and west have not yet been received in the Washington Office.

5. Comparison with Prior Surveys

There are no prior surveys by this Bureau within the limits of the present survey.

6. Comparison with Drawing of Chart 8994, dated 4/6/54
" " " " Chart 8995, dated 4/6/54
Comparison with Chart 9302 (latest print date 6/15/53)

A. Hydrography

The charted hydrography originates principally with the present survey prior to verification and review and with a few soundings from an undetermined source. Except as noted below, only minor differences of 1 fm. between the charted and present depths were noted.

The 18-fm sounding charted in lat. 57°14.0', long. 170° 33.0', from an early source which is not readily ascertainable, falls in present depths of 33-35 fms. The sounding is believed to originate with a trackline or a reconnaissance survey and should actually fall on a 19-fm. shoal located about 3 miles to the southwestward. The 18-fm. sounding should, therefore, be deleted from the chart.

The present survey supersedes the charted information within the common area.

B. Aids to Navigation

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

7. Condition of Survey

The survey has been given only a preliminary verification. A complete statement concerning the condition of the survey will be made after the survey has been completely verified.

The preliminary verification revealed no deficiencies worthy of mention.

8. Compliance with Project Instructions

The present survey adequately complies with the Project Instructions.

9. Additional Field Work Recommended

This is a very good 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-8072 (1953)

Verified and inked by - J. C. Chambers (N. P. O.)
Review Addendum by - I. M. Zeskind 6-13-56
Inspected by - R. H. Carstens

The verification of this survey has been completed. Soundings and depth curves have been completely inked. Junctional soundings of the present survey have been transferred to contemporary verified surveys H-8073 (1953) on the east, H-7948 (1951-53) on the southeast, H-8120 (1954) on the shoal in the vicinity of lat. 57°10.5', long. 170°38.5', and H-8121 (1954) on the east in the vicinity of lat. 57°14.5', long. 170°33'. Junctions with H-7950 (1951-53) on the north, with H-7949 (1951-52) on the northeast, with H-7951 (1951-52) on the east, and with H-8103 (1953) on the west and south will be considered in the reviews of those surveys.

Comparison with Chart 8994 (latest print date 6-21-54)
Chart 8995 (latest print date 6-14-54)
Chart 9302 (latest print date 6-15-53)

The charted hydrography originates with the sources given in paragraph 6A of the Review. Except for the 18-fm. sounding recommended for deletion from the charts in paragraph 6A of the Review only minor differences of 1 - 2 fms. are noted between the charted soundings and present depths. The 36-fms. charted in lat. 57°29.6', long. 170°29.2', and the 40-fms. charted in lat. 57°25.8', long. 170°18.1' on Chart 8995 differ with present depths by 3 fms.

The present survey supersedes the charted information within the common area.

Condition of Survey

(a) Completion of verification and inking reveals that the smooth plotting was well done.

(b) The Descriptive Report is complete and comprehensive.

Approved:

Charles A. Schanck
Chief, Chart Division

RHC

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

839

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~ 24 March 1954

Division of Charts: R. H. Carstens

Plane of reference approved in
12 volumes of sounding records for

HYDROGRAPHIC SHEET 8072

Locality Pribilof Islands, Alaska

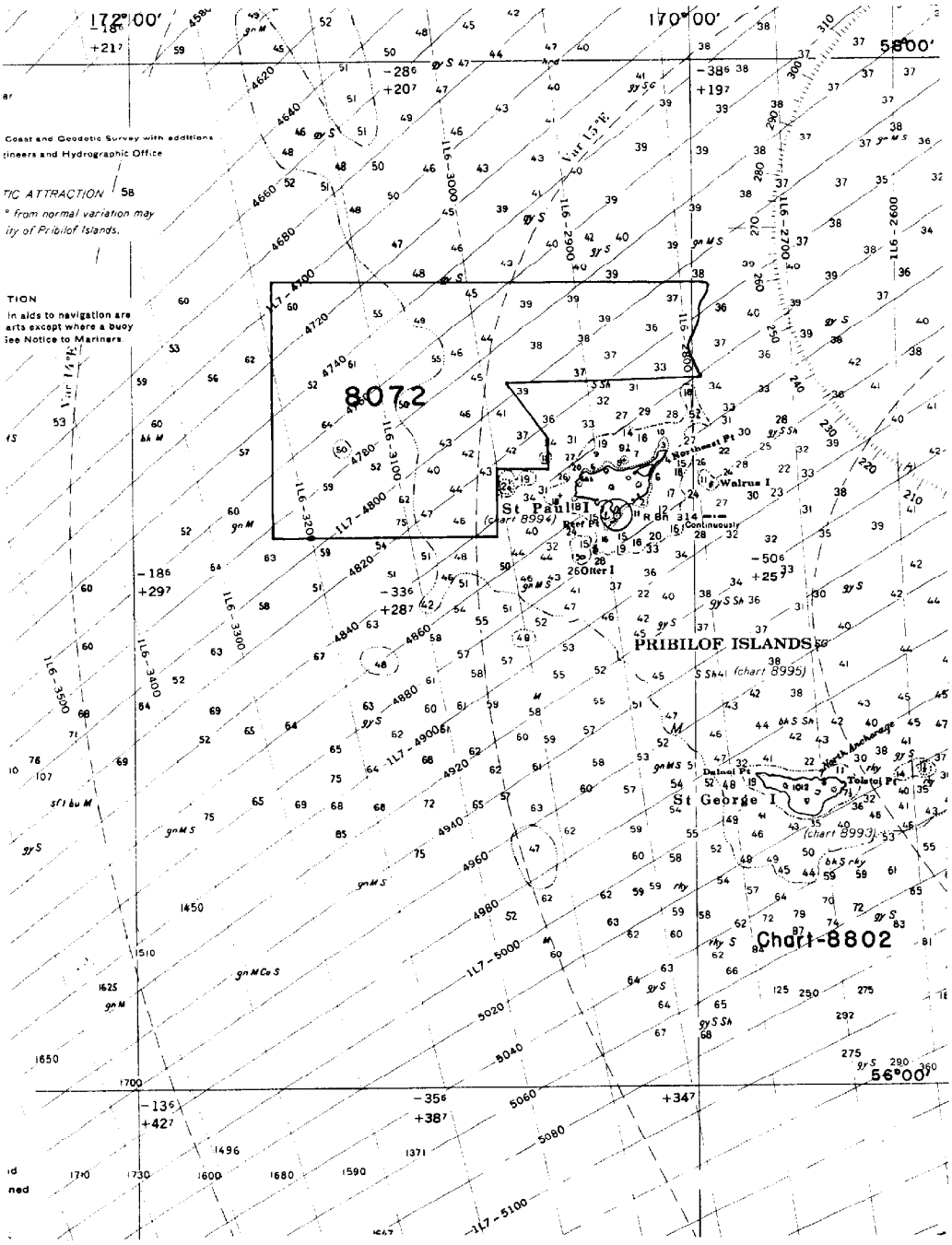
Chief of Party: K. G. Crosby in 1953
Plane of reference is mean lower low water, reading
3.1 ft. on tide staff at Village Cove
9.5 ft. below B. M. 2 (1946)

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.

U. S. GOVERNMENT PRINTING OFFICE 877033


172°00'
170°00'
58°00'
56°00'
8072
St Paul I
(chart 8994)
PRIBILOF ISLANDS
(chart 8995)
St George I
(chart 8993)
Chart-8802
Walrus I
Otter I
Var 15°E
Coast and Geodetic Survey with additions
tineers and Hydrographic Office
TIC ATTRACTION
from normal variation may
ity of Pribilof Islands.
TION
In aids to navigation are
arts except where a buoy
See Notice to Mariners

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8072

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
3/12/54	8995	Chas R. Wittmann	Before ~~After~~ Verification and Review
Oct 1954	9302	S.H.E.	~~Before~~ After Preliminary Verification and Review
	8802	Thru 8995	Before ~~After~~ Verification and Review
4-24-59	8994	R.K. DeLauder	~~Before~~ After Verification and Review
9 Jan 61	8995	Nichols	Before After Verification and Review In part Thru 8994. Dwg 4.
10 Jan 61	8802	"	~~Before~~ After Verification and Review Thru 8895
"	9302	"	~~Before~~ After Verification and Review Thru 8802
1 Feb 61	9000	Eng Dept	~~Before~~ After Verification and Review Thru 9302
			Before After Verification and Review
			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.