

# 8004

Diag. Cht. Nos. 8802-3, 8993, 9000-1 & 9302.

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

## DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey ..... **Hydrographic** .....

Field No. .... **FF-1252** .....

Office No. .... **H-8004** .....

### LOCALITY

State ..... **Alaska** .....

General Locality ... **Pribilof Islands - St. George I.** .....

Locality **Vicinity of North Anchorage** .....

1952

CHIEF OF PARTY  
**C. Pierce**

### LIBRARY & ARCHIVES

DATE ..... **3-25-53** .....

# 8004

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-8004

Field No. PF-1252

State ALASKA

General locality PRIBILOF ISLANDS - St. George I.

Locality Vicinity of North Anchorage, ~~St. George Island~~

Scale 1:10,000 Date of survey 8 July 1952 to 13 Sept. 1952

Instructions dated 6 March 1952, Supplemental Instructions 21 March 1952

Vessel USCGC PATHFINDER

Chief of party Charles Pierce

Surveyed by Ships Officers

Soundings taken by fathometer, graphic recorder, ~~hand lead wire~~

Fathograms scaled by MJT, EEE, KWB, HJH

Fathograms checked by MJT, EEE

Protracted by E. Ellis, E. Maran

Soundings penciled by E. Maran

Soundings in fathoms ~~xxxx~~ at ~~MLLW~~ MLLW

REMARKS:

DESCRIPTIVE REPORT

To accompany

HYDROGRAPHIC SURVEY H-8004 (PF-1252)

NORTH ANCHORAGE, ST. GEORGE ISLAND

Pribilof Islands, Alaska

SCALE 1: 10,000

1952

USC&GSS PATHFINDER

Charles Pierce, Comdg.

Surveyed by Ship's officers.

A PROJECT

1. Project GS-343, Bering Sea, Alaska ✓
2. Instructions 22/MEK 6 March 1951  
Supplemental Instructions 22/MEK, 21 March 1952 ✓

B SURVEY LIMITS AND DATES

1. The survey covers the inshore hydrography off St. George Village. ✓  
Limits are the lines between the following points:

Lat. 56°36'.5 N	Lat. 56°39'00"N
Long. 169°35'.0 W	Long. 169°30'.00'W

Lat. 56°38'.0 N  
Long. 169°37'.0 W

Lat. 56°36'.0 N  
Long. 169°33'.0 W

Lat. 56°36'.5 N  
Long. 169°30'.5 W

2. The hydrography was done between the dates 8 July 1952 and 13 September 1952, at such times as the ship was anchored in the vicinity. This survey was incidental to other work.

C VESSEL AND EQUIPMENT

1. The hydrography was done by the Ship and launches 1, 2, and 3.
2. Echo sounding equipment used consisted of 808 type fathometers operated on the fathom scale, A phase only.

<u>Launch</u>	<u>Fathometer</u>	<u>Day</u>
3	46	a,b,
1	52	c,d
2	74S	e
Ship	130S	A,B,C,D,E,F,G,H

3. The turning radius <sup>of</sup> the launches is estimated at 15 meters. ✓  
 The turning radius <sup>of</sup> the Ship is estimated to be 450 meters. The launches operated at speeds of 6 to 7 knots.

#### E SMOOTH SHEET

1. The smooth sheet was constructed by hand aboard the Ship PATHFINDER using conventional methods. ✓

#### F CONTROL STATIONS

1. Positions of control stations for this survey are referred to the 1927 North American Datum. Published positions of triangulation are from observations in 1897, 1944, and 1951, and are on the 1944 St. George - St. Paul Datum. Positions of these stations have been referred to the 1927 North American Datum by application of correction as discussed in "DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY H-8001 (PF10152)", submitted separately.

#### G SHORELINE AND TOPOGRAPHY

1. A topographic survey, Field No. PFA-52, of the landing in the vicinity of St. George Village was accomplished. Because there is a small amount of topographic detail included, no registry number has been requested. Shoreline and topographic details were plotted from theodolite cuts and measured distances to features were supplemented by sketches made in the field. NOT AVAILABLE (PFA-52)

2. The general shoreline and topographic details have been omitted from the smooth sheet, except for insert PF-A-52, since there are no contemporary topographic surveys in the area. St. George Island is covered by Topographic Survey No. 2287 bis, 1897, scale 1:20,000, and although much of the shoreline and topographic detail appear to be still adequately delineated, differences in datum do not facilitate transfer in the field.

## H SOUNDINGS

1. Depths were measured by the echo sounding equipment listed in section C above. There are complete and legible fathograms for all periods of sounding.
2. Velocity corrections have not been applied. (Reference: Director's letter 21/MEK, S-1-PF, Subject - Fathometer Corrections, Alaska", 21 June 1951.)  
*(Velocity correction not significant in these waters)*
3. Instrumental corrections for 808 fathometer No. 130-S, used on PATHFINDER have been determined as explained in the report "Fathometer Corrections, 1952", submitted separately.

Corrections for the various launch fathometers used have been determined partly by the method devised by H. J. Healy in which a separate fathometer oscillator unit, connected to the graphic recorder, is lowered to pre-determined depths by means of a graduated line, and depths registered on the fathogram are multiplied by two and compared with the known depths of the oscillator unit to determine the correction, and partly by direct comparison with leadline soundings.

In order to avoid including effects resulting from the variation of the velocity of sound from the calibration velocity of 800 fms/sec in these corrections, comparisons only to maximum depth of 6 fathoms have been considered. Comparisons were made with with fathometer initials set at zero and initial settings were kept at zero for all soundings. Corrections for variation from this standard setting were applied when the fathograms were scanned and have not been entered in sounding records.

For detailed information concerning derivation of these corrections reference should be made to the report "Fathometer Corrections, 1952", submitted separately.

## I CONTROL OF HYDROGRAPHY

1. Throughout this survey, visual control was used.
2. See list of hydro-signals and source included at end of report.
3. Positions 1d thru 23d were plotted with very weak control. Positions 109c thru 113c were not plotted because the plotted positions were erratic.

## J ADEQUACY OF SURVEY

1. The survey is adequate within the area covered and the depth curves are adequately delineated. Additional hydrography in the landing area at St. George Village and inshore to the HW line is required for a complete basic survey.

K CROSSLINES

1. Crosslines amount to 12% of the regular system of lines. ✓
2. Agreement at crossings is satisfactory. ✓

L COMPARISON WITH PRIOR SURVEYS

1. There are no prior surveys in the area and no junctions were made with prior or contemporary surveys. ✓

M COMPARISON WITH CHART

1. Comparison was made with Chart 8995, Pribilof Islands, Alaska, 4th edition, and with Chart 8996, St. Paul and St. George Islands, 3rd edition 1934 and were found to be in general agreement. ✓

N DANGER AND SHOALS

1. There are numerous rocks in the landing area which are dangerous.
2. In the area surveyed there are no unusual places.

O COAST PILOT INFORMATION

1. Information <sup>of</sup> this nature has been separately submitted for the general area from time to time. ✓

P. AIDS TO NAVIGATION

1. The only aid to navigation is a privately maintained beacon Lat.  $56^{\circ} 36'.2''$  N, Long.  $169^{\circ} 32'.0''$ . The beacon is a cross about 8 feet high painted white. It is not prominent and shows only under conditions of unusual visibility. Refer to Chief of Party's letter to The Director 905/CP, dated 3 September 1952. ✓

Q LANDMARKS FOR CHARTS ✓

1. Recommend that the following be charted as landmarks;

TABLE --- Chart shape rather than point Lat.  $56^{\circ} 36'.2$  N  
Long.  $169^{\circ} 32'.6$  W

DING ---- Building with watchtower on top  
Lat.  $56^{\circ} 36'.1$  N  
Long.  $169^{\circ} 37'.1$  W

DERRICK -- Derrick on boat landing  
Lat.  $56^{\circ} 36'.2$  N  
Long.  $169^{\circ} 32'.7$  W

Z TABULATION OF APPLICABLE DATA

1. Forwarded with boat-sheet;
  - a. Topographic sheet PF-A-52 NOT AVAILABLE

This report is respectfully submitted by

Edward C. Maran

Edward C. Maran  
Ens. USC&GS

RHC

## TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

3 April 1953

Division of Charts: R. H. Carstens

Plane of reference approved in 4  
volumes of sounding records for

HYDROGRAPHIC SHEET 8004

Locality St. George Island, Alaska

Chief of Party: C. Pierce in 1952

Plane of reference is mean lower low water, reading  
4.3 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.



FATHOMETER CORRECTIONS

HYDROGRAPHIC SURVEY H-8004 (PF-1252)

Corrections for Launch 808 Fathometers

Period: 8 July 1952 to <sup>Sept. 13</sup> ~~21~~ March 1952

<u>Launch No. 1</u>		Fathometer No. 52 Fathom Scale-A Phase
to depth (fms)	corr. (fms)	
55	+ 0.2	

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<u>Launch No. 2</u>		Fathometer No. 74S Fathom Scale - A Phase
to depths (fms)	corr. (fms)	
55	+ 0.2	

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<u>Launch No. 3</u>		Fathometer No. 46 Fathom Scale - A Phase
to depths (fms)	corr. (fms)	
55	+ 0.2	

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Corrections for Ship Fathometer

Period: 8 July 1952 to 21 March 1952

808 Fathometer No. 130S		For reduced speed (45 - 75) RPM
to depths (fms)	corr. (fms)	
55	0.0	

List Of  
HYDROGRAPHIC SIGNALS

<u>HYDRO NAME</u>	<u>TYPE</u>	<u>SOURCE</u>
Ran	TRIANGULATION	EAST POLE, 1944 ✓ (Loran antenna)
Cross	TRIANGULATION	CROSS, 1951 (St. George Greek Orthodox church)
B eacon	TRIANGULATION	BEACON, 1951 ✓ ( St. George)
Northeast	TRIANGULATION	NORTHEAST, 1897 ✓
Derrick	HYDROGRAPHIC	Topography ✓
Hut	HYDROGRAPHIC	Hydrographically ✓
Ding	HYDROGRAPHIC	Hydrographically ✓
Planē	HYDROGRAPHIC	Hydrographically ✓

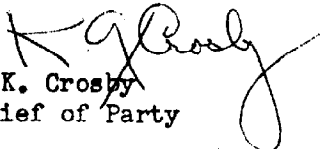
APPROVAL SHEET

HYDROGRAPHIC SURVEY H-8004 (PF 1252)

The field work was done under the general supervision of Charles  
Pierce, Chief of Party.

The survey is complete and the area about the North Anchorage,  
St. George Island, Alaska is adequately developed.

The completed Smooth Sheet and accompanying records have been  
examined by me and are approved.

  
K. Crosby  
Chief of Party

GEOGRAPHIC NAMES

Survey No. H-8004

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
<u>Alaska</u>												1
<u>Pribilof Islands</u>											RMH	2
<u>St. George Island</u>												3
<u>North Anchorage</u>												4
<u>Bering Sea</u>											RMH	5
												6
<u>ST. GEORGE</u>												7
<u>EAST LANDING</u>												8
												9
												10
												11
												12
<u>Village Cove, St.</u>												13
<u>Paul Island</u>												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27

Names underlined in red are approved  
4-3-53 L. Heck

Approved  
C. Huntington 25 Nov 1974

(location of tide gage)

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8004.....

Records accompanying survey:

Boat sheets <sup>2 Aluminum</sup> ~~2~~ sounding vols. <sup>4</sup> ~~4~~; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls <sup>1 Env.</sup> ~~1~~;  
 special reports, etc. <sup>1 Smooth Sheet; 1 Descriptive Report;</sup> ~~1~~.....  
 .....

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

Number of positions on sheet		543.
Number of positions checked		117.
Number of positions revised		16.
Number of soundings revised (refers to depth only)		24.
Number of soundings erroneously spaced		200.
Number of signals erroneously plotted or transferred		0.
Topographic details	Time	10.
Junctions	Time	23.
Verification of soundings from graphic record	Time	10.

Verification by Bruce Alan Olmstead Total time 208.. Date 12/12/72

Reviewed by Mark J. Friese Time 51 hrs. Date 12/19/74  
Insp. F. B. Powers 25 hrs 12-6-74

TIDE NOTE

HYDROGRAPHIC SURVEY H-8004 (PF1252)

1. Records from the Portable Automatic Tide Gage maintained at Village Cove, St. Paul Island, Alaska, Latitude 57 07'.5 N., Longitude 170 16'.5 W., during the period of the field work were used for the reduction of soundings for tide.

2. 4.3 feet on the staff corresponded to MLLW in 1952.

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

4. Tidal Data from this gage were used without application of corrections for time and height differences. (Reference : Director's letter 36 rob, Subject "Tide zones and Reducers, Pribilof Islands area, Alaska, 18 September 1952).

H-8004

Items for Future Presurvey Reviews

There are no significant items considered for future presurvey reviews.

<u>Position Index</u>		<u>Bottom Change</u>	<u>Use</u>	<u>Resurvey</u>
<u>Lat.</u>	<u>Long.</u>	<u>Index</u>	<u>Index</u>	<u>Cycle</u>
563	1694	1	0	50 years

OFFICE OF MARINE SURVEYS AND MAPS  
MARINE CHART DIVISION  
HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8004

FIELD NO. PF-1252

Alaska, Pribilof Islands-St. George I., Vicinity of North Anchorage

SURVEYED: July 8 through September 13, 1952

SCALE: 1:10,000

PROJECT NO.: CS-343

SOUNDINGS: 808 Echo Sounder

CONTROL: Sextant Fixes  
on Shore  
Signals

Chief of Party ..... C. Pierce  
Surveyed by ..... Ship's Officers  
Protracted by ..... E. Ellis  
..... E. Maran  
Soundings Plotted by ..... E. Maran  
Verified and Inked by ..... B. A. Olmstead  
Reviewed by ..... M. J. Friese  
..... Date: November 26, 1974  
Inspected by ..... F. B. Powers

1. Description of the Area

This survey covers an area along the northern portion of St. George Island at North Anchorage. It extends from the shoreline to about 2 miles offshore.

The bottom slopes gradually from inshore depths of less than 6 fathoms to depths of about 40 fathoms offshore.

The predominant bottom characteristics are sand and shells.

2. Control and Shoreline

The source of control is adequately stated in Part F of the Descriptive Report.

The shoreline originates with unregistered topographic survey PF-A-52 and chart 8993 dated August 1, 1970, and is shown for orientation purposes only.



### 3. Hydrography

- A. Depths at crossings are in good agreement.
- B. The usual depth curves are adequately delineated except within the area of the 5-fathom depth curve.
- C. The development of the bottom configuration and the investigation of least depths are considered adequate.

### 4. Condition of the Survey

The field work, sounding records, and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual.

### 5. Junctions

Adequate junctions were effected with H-7914 (1951) on the north and northeast and with H-8003 (1952) on the east. The junctions with unverified surveys H-8001 (1952) and H-7949 (1951-52) will be discussed in the reviews of those surveys.

### 6. Comparison with Prior Surveys

- A. T-2287bis (1897) 1:20,000

This is the only survey that falls within the limits of the present survey. Three rocks awash and notations of breakers and kelp have been carried forward to supplement the present survey information.

### 7. Comparison with Chart 16381 (Formerly C&GS 8993) (latest print date, June 15, 1974)

#### A. Hydrography

The charted hydrography originates with the boat sheet and unverified smooth sheet of the present survey. Differences of 1 fathom exist between charted depths and depths as shown on the present survey.

Attention is directed to the items below:

- (1) The jetty charted in latitude  $56^{\circ}36.27'$ , longitude  $169^{\circ}32.67'$ , from U.S. Navy information (CL 184/1956) is subsequent to the present survey and should be retained on the chart.

(2) The 1-fathom 4-foot sounding charted in latitude  $56^{\circ}36.2'$ , longitude  $169^{\circ}32.91'$ , from the unverified smooth sheet of the present survey is an erroneous depth and should be deleted from the chart.

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

B. Aids to Navigation

The privately maintained daybeacon located on the present survey in latitude  $56^{\circ}36.64'$ , longitude  $169^{\circ}32.69'$ , is not presently charted.

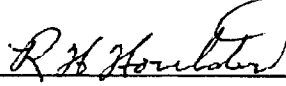
8. Compliance with Project Instructions

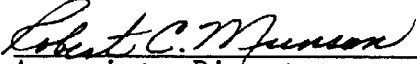
This survey adequately complies with the Project Instructions, except for Paragraphs 9 and 10 in which contemporary topographic surveys should have been made within the present survey area.

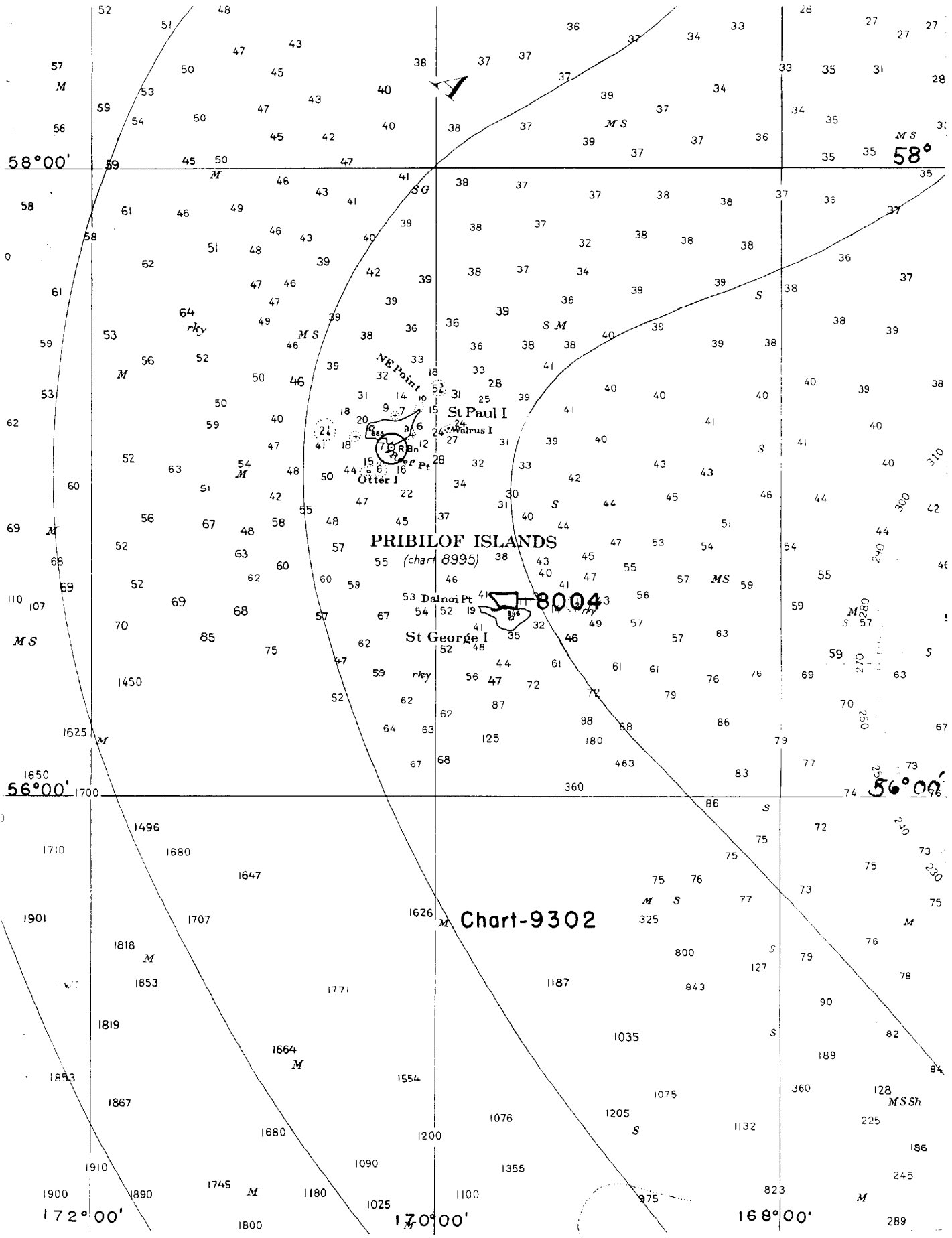
9. Additional Field Work

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

Examined and Approved:

  
\_\_\_\_\_  
Chief  
Marine Chart Division

  
\_\_\_\_\_  
Associate Director  
Office of Marine Surveys  
and Maps



**PRIBILOF ISLANDS**

(chart 8995)

**Chart-9302**

**8004**

58°00'

58°

56°00'

56°00'

172°00'

170°00'

168°00'

# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8004

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
9 Mar 54	8993	Nichols	<del>Before</del> <del>After</del> Before Before Partial appl. Verification and Review only
3/24/54	8995	Wittmann	Before <del>After</del> Verification and Review Part thru 8993
Mar 55	8902	G.H.E.	Before <del>After</del> Verification and Review via 8995
3-6-61	9302	J.M. Albert	Before <del>After</del> Verification and Review consider completely applied for this scale.
3/30/76	8993	Naiter	partly <del>before</del> After Verification and Review, Insp, and Signature
4/1/76	8802	Naiter	Part <del>Before</del> After Verification and Review, Insp, and Sign
5/11/76	8995	M.D. Kain	PART <del>Before</del> After Verification and Review, Insp + Signature for critical corrections thru Chart 8993
9/27/79	530(9000)	M.D. Kain	Full <del>Before</del> After Verification and Review - Signature
2/19/80	16001 (8802)	M. Sage	Full <del>Before</del> After Verification and Review, Insp & signature consider final application at this scale.
11/30/83	16006	J. Bailey	FULL <del>Before</del> After Verification and Review + INSP. + SIG. No corr. App'd. thru 16011 DRWG. # 29.
3/26/90	16606	DMCAHNON	CONSIDER ADEQUATELY APPLIED
4-23-90	16381 (8993)	Ed Martin	Considered adequately applied, no further
4-23-90	16381 (8993)	Ed Martin	Considered fully applied, After Ver, Rev, Insp's Sig. no further processing required.

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.