8223

Diag. Cht. No. 8802-3.

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. Pf-4155 *Office No.* H-8223

LOCALITY

State Alaska

General locality

Locality Approaches to Port Moller

1955

CHIEF OF PARTY

K. G. Crosby

LIBRARY & ARCHIVES

DATE January 24, 1956

USCOMM-DC 5087

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-8223

Field No. PF-4155

State Alaska

General locality ~~North Side Alaska Peninsula~~ Approaches to

Locality Port Moller

Scale 1:40,000 Date of survey May - July 1955

Instructions dated 20 December 1954

Vessel Ship PATHFINDER

Chief of party K. G. Crosby

Surveyed by A. L. Wardwell, P. A. Weber, J. O. Boyer, W. E. Randall

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

Fathograms scaled by J. L. Larrabee, R. Saunders, R. Rector, D. Smith

Fathograms checked by A. L. Wardwell, P. A. Weber, J. P. Randall, K. E. Taggart

Protracted by P. A. Weber

Soundings penciled by K. E. Taggart

Soundings in fathoms ~~feet meters~~ MLLW

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 693019

DESCRIPTIVE REPORT

To Accompany

HYDROGRAPHIC SHEET H-8223 (Field No. PF-4155)

NORTH SIDE ALASKA PENINSULA

Scale: 1:40,000

1 9 5 5

USC&GS SHIP PATHFINDER K. G. CROSBY, COMMANDING

A. PROJECT:

This survey is part of Project No. 1375. Original instructions were dated 20 December 1954.

B. SURVEY LIMITS AND DATES:

This sheet covers that part of Bering Sea off the entrance to Port Moller, between latitudes 56° 04' to 56° 20' N. and longitudes 160° 34' to 161° 12' W. Field work was started on 26 May and completed on 28 July 1955.

No complete prior surveys exist to be joined, but there are some exploratory lines run in the area in 1947 and 1948. Copies of these are labeled "FE No. 5, 1947" and "FE No. 10, 1948" respectively. One contemporary survey, No. H-8224 (Field No. PF-2155) joins this on the south.

C. VESSEL AND EQUIPMENT:

The Ship PATHFINDER, a single-screw vessel with turning radii as listed below (the only data available is for a speed of 130 RPM whereas standard speed is 112 RPM)

	Radius (meters)	Rudder Indicator
Port turn	167	32°
Starboard turn	153	36°

Soundings were obtained by an 808 type graphic recorder, No. 1308.

D. TIDE AND CURRENT STATIONS:

A standard tide gage was in operation at Entrance Point, Port Moller. Reducers obtained from its record were used without correction for time or range.

No current stations were occupied within this survey.

E. SMOOTH SHEET:

Projection was made by hand, aboard the ship. No shoreline or signals appear.

F. CONTROL STATIONS: Shoran stations fall of the sheet

None

G. SHORELINE AND TOPOGRAPHY:

None

H. SOUNDINGS:

Depths were measured by an 808-type recording fathometer. Vertical casts were taken on nearly all days. The initial mark on the graphic record was kept at 2 fm. and a correction for draft, representing the difference between 2 fms. and the actual draft, was applied to all soundings. A tabulation of the combined index, draft and settlement and squat corrections is a part of this report. The total of these corrections was entered in the sounding volumes under the heading of "Echo". Any divergence of the initial from the desired value of 2 fathoms is entered as a correction in the column headed "initial". Only "A" scale of the depth recorder was used.

I. CONTROL OF HYDROGRAPHY:

All hydrography was controlled in position by shoran distances from two stations, both of which were set up at triangulation stations. SHO-MO was at AS-1147(U.S.L.M.) 1950 and SHO-HAG at HAGUE 1950. Intersections of the distance arcs from these two stations were good except at the extreme northwestern part where the angle of intersection was about twenty degrees. Corrections were applied to recorded shoran distances as described in the special report on shoran calibration.

J. ADEQUACY OF SURVEY:

This survey is considered to be complete and adequate to supersede prior surveys for charting. Junction was made with only one contemporary survey, a 1:20,000 launch sheet (H-8224) to the south. Since that sheet has not been smooth plotted at the date of this report, discussion of the junction will be taken up in the report on that survey.

See IP 5, Review

K. CROSSLINES:

Crosslines comprise 14% of the total sounding lines run. Depths at crossings agree quite well except at the places listed below:

1. The crossline on P day, from positions 5P to 17P is shoaler than

the lines it crosses by amounts varying from 0.3 to 0.9 fm. (up to 5% of the depth).

2. The crossline on K day, between positions 217K and 230K is deeper than the lines it crosses from 0.2 fm. to 0.6 fm. (up to 5% of the depth).

plotted 1 fm discrepancies not considered significant

3. Other portions of the K day line seem to be deeper than adjacent lines, notably from position 146K to 187K where discrepancies with 13 crossings vary by 0.3 to 1.0 fms. K day looks especially bad in the area of latitude 56° 13' to 56° 15', longitude 160° 53' to 160° 58'. Weather conditions cannot account for this variation, as the winds on K day were logged as being substantially the same as on L and M days, which depths at crossings do not agree. Tide reducers may make the difference as the curve for K day shows a rapidly falling tide to a low at about 1500 hours. The curves for L and M days show a high at 1000 and at 1300, respectively, with a somewhat slower rate of fall thereafter. The part of the line mentioned above as being especially bad was run near the time of low water on the tide curve for K day. It may be that the fall was not as great out where the soundings were taken as at the tide gage where the effect of the wind would be greater.

L. COMPARISON WITH PRIOR SURVEYS:

The only prior survey sheets furnished for comparison are reductions of Chart No. 8802, labeled "F.E. No. 5, 1947" and "F.E. No. 10, 1948" showing reconnaissance lines run in those years. The lines run in 1947 do not agree with each other nor (in most parts) with this survey. No doubt this is due to lack of adequate control. The one line run in 1948 agrees fairly well, except that the 19 fm. sounding at about latitude 56° 14' longitude 160° 10' should be 25 fm.

See #6, Review

M. COMPARISON WITH CHART:

Comparison with Chart No. 8802, print date 12/29/52, shows a great variation. Probably this is due to most of the charted soundings having been taken from F.E. No. 5, 1947, which is discussed in item L above.

See #7 Review

N. DANGERS AND SHOALS:

None found ✓

O. COAST PILOT INFORMATION:

Covered in a special Coast Pilot Report for the area. ✓

P. AIDS TO NAVIGATION:

None ✓

Q. LANDMARKS FOR CHARTS:

None ✓

R. GEOGRAPHIC NAMES:

A special report to cover the season's working area will be submitted. ✓

S. SILTED AREAS:

None found ✓

T. - Y. Not applicable ✓

Z. TABULATION OF APPLICABLE DATA:

Name	Date Forwarded
1. Coast Pilot Notes	13 October 1955
2. Fathometer Correction Report	✓
3. Shoran Correction Report	
4. Tide Records, Port Moller	

Respectfully submitted,

Arthur L. Wardwell

ARTHUR L. WARDWELL
Commander, USC&GS

Approved and Forwarded:

K. G. Crosby

K. G. CROSBY
Captain, USC&GS
Comdg. Ship PATHFINDER

STATISTICS FOR HYDROGRAPHIC SURVEY H-8223

FIELD NO. PF-4155

SHIP PATHFINDER PROJECT NO. 1375

VOL. NO.	DAY LETTER	DATE 1955	NUMBER OF POSITIONS	NUMBER OF STAT. MI. SOUNDING
I	A	26 May	19	23.0
	B	4 June	21	18.4
I & II	C	5 June	178	124.2
II	D	6 June	206	139.0
III	E	13 June	213	152.6
IV	F	15 June	69	51.0
IV	G	16 June	125	93.6
V	H	17 June	75	51.5
V	J	18 June	115	84.1
VI & VII	K	20 June	230	168.0
VII	L	22 June	171	123.8
VII & VIII	M	24 June	187	133.8
VIII	N	28 June	30	19.0
VIII	P	6 July	22	14.5
IX	Q	7 July	30	20.7
IX	R	11 July	35	- - -
IX	S	12 July	95	57.7
IX	T	13 July	103	61.4
X	U	14 July	25	- - -
X	V	28 July	59	30.4
		TOTALS	2,008	1,366.7

TIDE NOTE

HYDROGRAPHIC SURVEY H-8223

A standard tide gage was in operation at Entrance Point, Port Moller, Alaska throughout the period of this work. Records from this gage, with no corrections for time or height, were used in reducing the soundings to the plane of MLLW.

ECHO CORRECTIONS

Ship PATHFINDER

SURVEY H-8223 (PF-4155)

DATE 1955	1 DEPTHS (AVERAGE) V.C. FATH.	2	3 DRAFT -2 FM.	4 CORRECT FATH. DEPTH (2+3)	5 INDEX CORRN. (1-4)	6 DRAFT CORRN. (3)	7 SETTLE-MENT & SQUAT	8 TOTAL CORRN. (5+6+7)
6/5	8.2	8.2	+0.47	8.67	-0.47	+0.47	+0.15	+0.15
6/16	13.74	13.45	+0.32	13.77	-0.03	+0.32	+0.15	+0.44
6/16	21.21	21.05	+0.32	21.37	-0.16	+0.32	+0.15	+0.31
6/17	13.76	13.40	+0.32	13.72	+0.04	+0.32	+0.15	+0.51
6/17	17.46	17.32	+0.32	17.64	-0.18	+0.32	+0.15	+0.29
6/18	21.60	21.39	+0.30	21.69	-0.09	+0.30	+0.15	+0.36
6/20	14.65	14.42	+0.27	14.69	-0.04	+0.27	+0.15	+0.38
6/22	15.25	15.12	+0.25	15.37	-0.12	+0.25	+0.15	+0.28
6/22	24.31	24.00	+0.25	24.25	+0.06	+0.25	+0.15	+0.46
6/24	13.24	13.03	+0.22	13.25	-0.01	+0.22	+0.15	+0.36
Mean (to be used for all soundings thru 6/24)					+0.4 fm.			
7/6	25.53	25.07	+0.48	25.55	-0.02	+0.48	+0.15	+0.61
7/7	11.16	10.87	+0.48	11.35	-0.19	+0.48	+0.15	+0.44
7/12	8.95	8.77	+0.43	9.20	-0.25	+0.43	+0.15	+0.33

Mean (to be used for all soundings in July) +0.5 fm.

SHORAN CORRECTIONS
SHIP 4155 & 2155

2155	4155	MO	HAG
A	A	-.049	-.038
	B	-.053	-.037
B	C	-.050	-.038
C	D	-.053	-.038
D	E	-.055	-.041
	F	-.054	-.038
	G	-.054	-.045
	H	-.056	-.040
	J	-.057	-.041
	K	-.053	-.044
	L	-.055	-.043
	M	-.056	-.047
	N	-.055	-.043
	P	-.055	-.046
	Q	-.058	-.047
	R	-.041	-.031
	S	-.040	-.031
	T	-.043	-.034
	U	-.041	-.032
	V	-.047	-.042

✓

APPROVAL SHEET

HYDROGRAPHIC SURVEY H-8223 (PF-4155)

OFF PORT MOLLER, ALASKA

This survey was done under my close supervision, the boat sheet being inspected daily while soundings were being made.

I consider this survey to be complete and adequate for charting. No additional work is recommended within the area covered.

K. G. CROSBY
Captain, USC&GS
Comdg. Ship PATHFINDER

GEOGRAPHIC NAMES

Survey No. H-8223

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			(title)							1
Alaska Peninsula			"						BGN	2
Port Moller			"						"	3
Bering Sea									BGN	4
										5
					Names approved					6
					1-24-56. L. Heck					7
										8
										9
Entrance Point			(title = staff location)							10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8223

Records accompanying survey:

Boat sheets 1; sounding vols. 10; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 4-Envelopes

special reports, etc. 2-Descriptive reports, 1-Smooth sheet, and .....

82 each - Shoran Plotting Abstract .....

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

Number of positions on sheet		2008
Number of positions checked		342
Number of positions revised		55
Number of soundings revised (refers to depth only)		63
Number of soundings erroneously spaced		2
Number of signals erroneously plotted or transferred		0
Topographic details	Time	0 hours
Junctions	Time	29 hours
Verification of soundings from graphic record	Time	3 hours

Verification by N. Terrell Robinson Total time 274 hours Date November 13, 1964

Reviewed by [signature] Time 20 Date June 8, 1965

M-2232-1

OFFICE OF CARTOGRAPHY
REVIEW SECTION -- NAUTICAL CHART DIVISION
REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8223 FIELD NO. PF-4155

Alaska, Approaches to Port Moller

SURVEYED: May--July 1955 SCALE: 1:40,000

PROJECT NO. 1375

SOUNDINGS: 808 Depth Recorder CONTROL: Shoran

Chief of Party----------K. G. Crosby
Surveyed by----------A. L. Wardwell
P. A. Weber
J. O. Boyer
W. E. Randall
Protracted by----------P. A. Weber
Soundings Plotted by----------K. E. Taggart
Verified and Inked by----------N. T. Robinson
Reviewed by----------I. M. Zeskind
Inspected by----------R. H. Carstens

Date: 6/8/65

1. Description of the Area

This survey covers the area in the vicinity of the entrance to Port Moller, Alaska north of lat. 56°04', between long. 160°34.0' and long. 161°12.0'. The bottom is fairly smooth.

2. Control and Shoreline

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

No shoreline is shown on this offshore survey.

3. Hydrography

Depths at crossings are in adequate agreement, except on portions of J, K and P days where depths at crossings

differed by as much as 1 fm. An examination of the records failed to reveal the source of these differences. However, these differences are considered to be insignificant.

4. Condition of Survey

a. The Descriptive Report and sounding records are complete and comprehensive.

b. The smooth plotting was accurately done, except that soundings greater than 11 fms. in depths were unnecessarily penciled in tenths of fathoms.

5. Junctions

Adequate junctions were effected with H-8538 (1960) on the north, and with H-8224 (1955) on the south in Port Moller. The junctions with H-8488 (1959) on the west, with H-8487 (1959) and H-8537 (1959-60) on the southwest will be considered in the reviews of those surveys. The project survey on the east has not as yet been received in the Washington Office.

6. Comparison with Prior Surveys

H-3189 (1910), 1:20,000
FE 5, 1947, 1:1,023,188 (Chart 8802)
FE 10, 1948, 1:1,023,188 (Chart 8802)

These surveys are of a reconnaissance nature and cover the area of the present survey. The surveys were controlled by dead reckoning. The soundings on H-3189 were obtained by leadline, whereas the soundings on the field examinations were obtained by fathometers whose recorded depths were only corrected for predicted tides. The paucity of soundings and poor control on the prior surveys afford little basis for comparison with the present survey.

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

H-8223

7. Comparison with Chart 8802 (Latest print date 11-4-63)
8833 (Latest print date 8-26-63)

A. Hydrography
Chart 8802

The charted hydrography originates principally with the present survey prior to verification and review, supplemented by a few soundings from the prior surveys, Only minor differences of 1-fm. between the charted and present survey depths are noted.

Chart 8833
The charted hydrography originates with the present survey prior to verification and review. A comparison between the chart and the present survey reveals only minor differences of 1 ~~ft.~~ fm. Soys are charted in fathoms

The present survey is adequate to supersede the charted depths.

B. Aids to Navigation

No aids to navigation fall within the limits of the present survey.

8. Compliance with Instructions

The survey adequately complies with the project instructions.

9. Additional Work Recommended

This is a good basic survey and no additional work is recommended.

Examined and Approved:

Chief,
Marine Chart Division

Associate Director,
Hydrography and Oceanography

RHC

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Coastal Surveys: 31 January 1956

Division of Charts: R. H. Carstens

Plane of reference approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 8223

Locality Alaska Peninsula, North Side

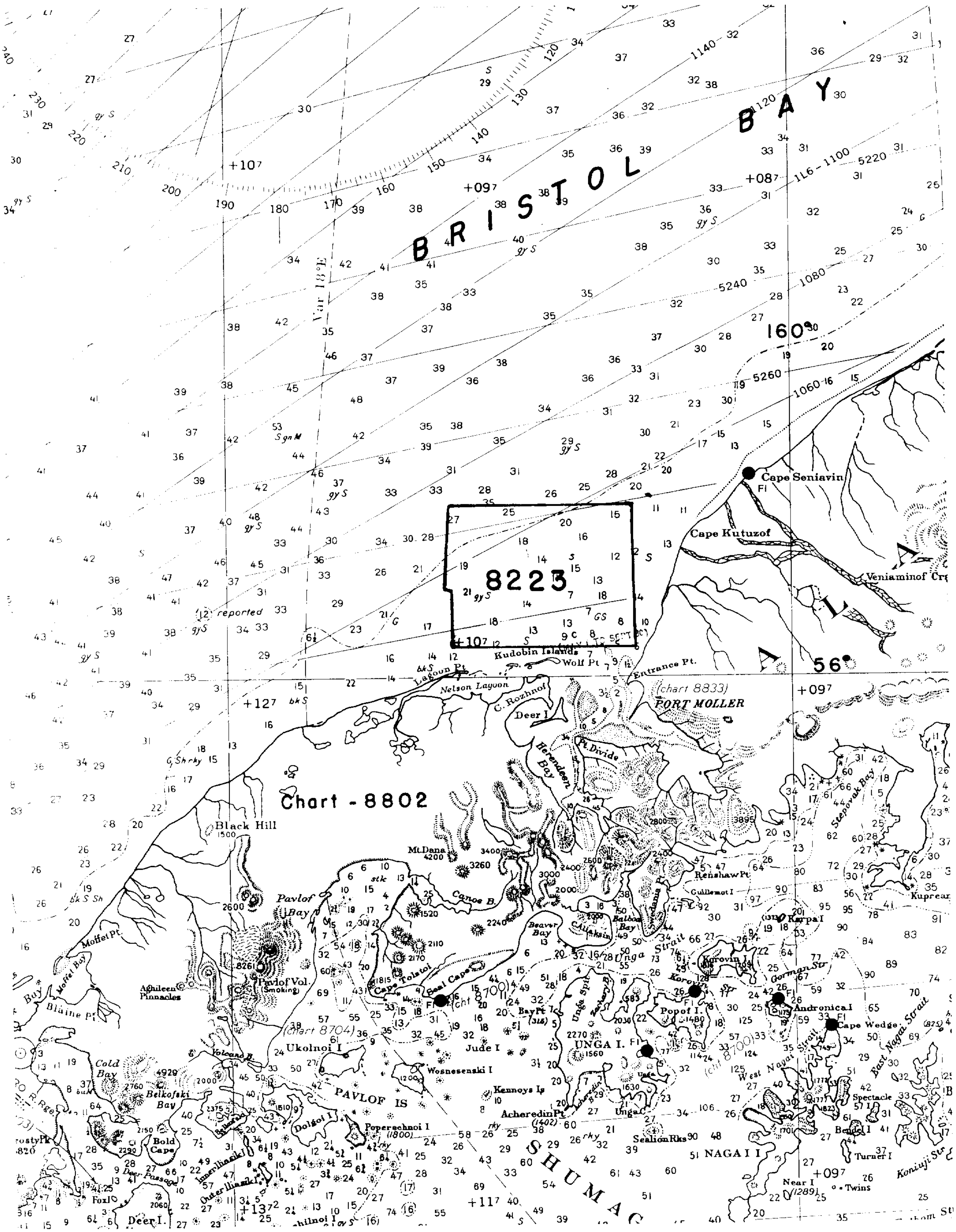
Chief of Party: K. G. Crosby in 1955
Plane of reference is mean lower low water, reading
2.4 ft. on tide staff at Port Moller
17.7 ft. below B. M. 1 (1939)

Height of mean high water above plane of reference is: 9.8 feet

Condition of records satisfactory except as noted below:

William Shofnos
Chief, Division of Tides and Currents Branch

U. S. GOVERNMENT PRINTING OFFICE 877933


BRISTOL BAY
8223
Chart - 8802
Cape Seniavin
Cape Kutuzof
Veniaminof Cr
Kudobin Islands
Wolf Pt
Entrance Pt.
Lagoon Pt.
Nelson Lagoon
C. Rozhnof
Deer I
(chart 8833)
PORT MOLLER
Herendeen Bay
Pt. Divide
Black Hill
Mt.Dana
Pavlof Bay
Canoe B.
Renshaw Pt
Guillemot I
Karpa I
Kuprean
Stepovak Bay
Moffet Pt.
Moffet Bay
Blaine Pt
Aghileen Pinnacles
Pavlof Vol. (Smoking)
Beaver Bay
Balboa Bay
Unga Strait
Korovin I.
Gorman Str
Cape Tolstoi
Seal Cape
(cht 8700)
Bay Pt
Unga Spit
Zachary B.
Popof I.
Andronica I
Cape Wedge
East Nagai Strait
West Nagai Strait
(chart 8704)
Ukolnoi I
Jude I
UNGA I.
(cht 8700)
Cold Bay
Volcano B.
Belkofski Bay
Wosnesenski I
PAVLOF IS
Kennoys Is
Achcredin Pt
Unga C
Dolgoi I
Poperechnoi I
Bold Cape
Deer Passage
Inner Iliasik I
Outer Iliasik I
Sealion Rks
NAGA I I
Spectacle I
Bendel I
Turner I
Koniuji Str
Near I
Twins
SHUMAG
Fox I
Deer I.
Var 18°E
160°
56°

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8223

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2-8-56	Reconstr. 8833	R. K. DeLawder	Complete application Before ~~After~~ Verification and Review To reconstr. Cht 8833.
2-25-61	8802	J. M. Albert	In part via 8833 Before ~~After~~ Verification and Review Completely
3-2-61	9302	JMA	via 8802 Before ~~After~~ Verification and Review Completely
5-29-63	8833	J. J. Streiffer	Complete application Before ~~After~~ Verification and Review for reconstr.
4-28-67	8833	O. Svendsen	Part. app Before ~~After~~ Verification and Review for reconstr.
7/31/68	9302	John P. Wein	~~Before~~ After Verification and Review Fully Applied
5-12-71	(16363) 8833	E. Frey	Fully appd Before ~~After~~ Verification and Review & Inspection Drg # 7
3-6-80	(8802) 16011	M. Sager	Fully applied Before ~~After~~ Verification and Review, Inspection & Signature, ~~Th~~ via Drwg Aid Proof # 27. Directly & Thru chart 16363.
			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.