

8304

Diag. Cht. No. 8302-3.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. PF-10156 Office No. H-8304

LOCALITY

State Alaska

General locality North Side of Alaska Pen-
insula

Locality North of Amak Island

194 56

CHIEF OF PARTY

John Bowie

LIBRARY & ARCHIVES

DATE October 24, 1956

8304

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-8304

Field No. PF-10156

State Alaska ✓

General locality North side of Alaska Peninsula ✓

Locality North of Amak Island ✓

Scale 1:100,000 Date of survey 27 July to 14 August 1956

Instructions dated 20 December 1954, 21 October 1955

Vessel USCGC PATHFINDER

Chief of party John Bowie

Surveyed by Personnel, Ship PATHFINDER

Soundings taken by fathometer, graphic recorder, hand lead, wire No. 130S. 808 Recording Fathometer

Fathograms scaled by C. B. Ellis

Fathograms checked by H. H. Druebert

Protracted by Personnel, Ship PATHFINDER

Soundings penciled by H. H. Druebert

Soundings in fathoms ~~XXX~~ at ~~XXXXX~~ MLLW AND ARE BASED ON A VELOCITY OF SOUND OF 800 FMS PER SEC.

REMARKS: _____

705

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY NO. H-8304 (PF-10156)

NORTH SIDE OF ALASKA PENINSULA, ALASKA

Scale 1:100,000

DATE 1956

USC&GSS PATHFINDER

John Bowie, Comdg.

A. PROJECT:

This survey was accomplished under Instructions - Project 13750, dated 20 December 1954, and Supplemental Instructions - Project 13750, dated 21 October 1955, both issued by The Director.

B. SURVEY LIMITS AND DATES:

This survey covers an area bounded on the east by longitude 162° - 42!3'; on the west by longitude 163° - 23!2'; on the north by latitude 55° - 49!2'; and on the south by latitude 55° - 33!5'.

Junction was made on the south with sheet No. H-8302 (PF-4156) and on the west with sheet No. H-6736 (1:120,000), 1940. *and on the southwest with - No. H-6791 (1:80,000) 1940*

Field work was started on 27 July 1956 and completed on 14 August 1956.

C. VESSEL AND EQUIPMENT:

All hydrography was done on Ship PATHFINDER. Soundings were taken with an 808 recording fathometer No. 130S. Bottom samples were taken by wire and snapper with ship sounding machine.

D. TIDES AND CURRENT STATIONS:

The tide station used for the entire sheet was established at the southeast side of Amak Island, as prescribed in the Project Instructions. No time or range corrections were applied.

No current stations were occupied within the limits of this survey.

E. SMOOTH SHEET:

The smooth sheet was originally constructed to be used as a boat sheet and therefore junctions of prior and contemporary surveys were inked. At a later date, the decision was made to use it as a smooth sheet, with a tracing paper overlay as the boat sheet. No attempt was made to erase the inked soundings at the junctions, as it might possibly damage the smooth sheet. All work of construction and

plotting of the smooth - boat sheet was by personnel of the Ship PATHFINDER. ✓

F. CONTROL STATIONS:

There was no control established within the area of the sheet. ✓

G. SHORELINE AND TOPOGRAPHY:

The area of the sheet is considerably offshore from the north side of the Alaska Peninsula, and therefore no shoreline or topography is required. ✓

H. SOUNDINGS:

Soundings were taken with an 808 type recording fathometer No. 130S operated on the fathom scale. Wire soundings were taken when obtaining bottom samples for fathometer comparison. ✓

The fathometer initial was set at 2.0 fathoms on the fathogram throughout the survey. Midship draft of ship, near the transceiver was taken periodically, when ship was underway. There were no phase comparisons as all soundings were under 50 fathoms. The fathometer (corrected for draft) compared favorably with the wire soundings, and no correction was applied. *Fath. calibrated at 800 fms/sec* ✓

The initial correction on the fathogram, combined with the draft readings, have been applied in the sounding volumes. A separate Fathometer Report has been submitted for this project. ✓

→ Special Report - Fathometer Corrections #151.

I. CONTROL OF HYDROGRAPHY:

The hydrography was controlled from two shoran stations MOF and NAP. MOF was located by a short traverse from triangulation station MOFFET 1952. NAP was centered over triangulation station GLAZENAP 1952. The geographic positions are as follows: ✓

Shoran MOF Lat. $55^{\circ} 27' 19.358''$ - 598.7m. (1257.0m.)
Long. $162^{\circ} 34' 43.073''$ - 757.1m. (297.5m)

Shoran NAP { Lat. $55^{\circ} 14' 26.596''$ - 822.5m (1033.0m)
GLAZENAP { Long. $162^{\circ} 59' 45.507''$ - 804.1m. (256.1m)
(Ref. Sta.)

GP. 294 16/11/4

The hydrography was carried offshore to the maximum limits of the shoran control. ✓

No unusual or substandard methods were used. Shoran calibrations were taken periodically, and their corrections recorded in the sounding volumes, and applied during the progress of the survey. A separate Shoran Calibration Report has been submitted for this project. ✓

→ Special Report - Shoran Corrections #152.

J. ADEQUACY OF SURVEY:

This survey is complete and adequate for charting purposes. ✓
Junction with adjoining sheet No. H-8302 (PF-4156) is satisfactory;
depth curves can be adequately drawn at junction, and no holidays exist.
Junction with sheet No. H-6732 (1:120,000) 1940, indicates that this
prior survey is, in general, about one fathom deeper. *the same is true
of H-6791 (1940)*

K. CROSSLINES:

There are 68.8 miles of crosslines or approximately 17% of ✓
total hydrography. All crossings are in good agreement.

L. COMPARISON WITH PRIOR SURVEYS:

With the exception of a few track lines by the U. S. Coast ✓
Guard, Coast Survey, and possibly Russians (the soundings of which are
shown on Chart No. 8802), no prior formal survey exists in this area.

M. COMPARISON WITH CHARTS:

This survey was compared with the latest editions of Charts
Nos. 8859, and 8802. No soundings are shown on Chart No. 8859, in the
area covered by this survey. Soundings on Chart No. 8802 (see paragraph ✓
L above) were transferred to the tracing paper boat sheet in red, and a
comparison made with the smooth sheet. In general, the charted
soundings are deeper, but there is no consistency or direct relation
from which a datum difference between the chart and the smooth sheet,
could be obtained.

N. DANGERS AND SHOALS:

There are no dangers or shoals in this survey. The Prelim-
inary Review, dated January 1955, stated in paragraph 2, that accord-
ing to Chart Letter 1085 (1953) a $3\frac{1}{2}$ fm. depth was reported by a Japan-
ese ship as being "about 20 miles NNW of Amak Island." This $3\frac{1}{2}$ fm.
shoal is shown on Chart No. 8802 in Lat. $55^{\circ} - 45'17''$; Long. $163^{\circ} - 07'15''$.
A development of the area indicates that no shoal exists. The bottom
is regular with depths over 40 fathoms. It is recommended that the
 $3\frac{1}{2}$ fm. depth be removed from Chart No. 8802.

✓
Removed
from Chart
by L. 747 (56)
JPS - Review

O. COAST PILOT INFORMATION:

Coast Pilot Information is being submitted as a separate ✓
report for this project.

P. AIDS TO NAVIGATION:

No aids to navigation exist within the limits of this survey. ✓

Q. LANDMARKS FOR CHARTS:

No landmarks for charts exist within the limits of this survey. ✓

R. GEOGRAPHIC NAMES:

Within the limits of this survey, no geographic names appear on the charts and none are recommended. ✓

S. SILTED AREAS:

No significant silted areas were noted but the general bottom characteristic is fine black sand. ✓

Z. TABULATION OF APPLICABLE DATA:

Tidal Data

Fathometer Report

Shoran Calibration Report

Coast Pilot Report

Respectfully submitted

William C. Russell

William C. Russell
CDR, C&GS

Approved and forwarded:

John Bowie
John Bowie
CAPT, C&GS
Comdg. Ship PATHFINDER

TABLE NO. 1
STATISTICS FOR HYDROGRAPHIC SURVEY
H-8304 PF-10156

VOL.	DAY	DATE	VESSEL	POS.	STAT. MI.	WIRE SDG.
1	A	27 July	PATHFINDER	81	80.7	8
1	B	12 August	PATHFINDER	61	69.8	0
1 & 2	C	13 August	PATHFINDER	189	220.8	0
2	D	14 August	PATHFINDER	94	102.7	0
TOTALS				<u>425</u>	<u>474.0</u>	<u>8</u>

Area = 345 square nautical miles = 455.4 square statute miles.

TIDE NOTE FOR HYDROGRAPHIC SURVEY
H-8304, Field No. PF-10156

Location of the tide station for this survey is on the southeast side
of Amak Island in: ✓

Lat. $55^{\circ} - 24'81''$
Long. $163^{\circ} - 06'90''$

MLLW on staff = 2.5 feet.

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens:

9 November 1956

Plane of reference approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 8304

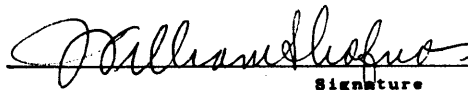
Locality North Side of Alaska Peninsula

Chief of Party: J. Bowie in 1956

Plane of reference is mean lower low water, reading
2.5 ft. on tide staff at Amak Island
16.4 ft. below B.M. 2 (1941)

Height of mean high water above plane of reference
is 6.9 feet.

Condition of records satisfactory except as noted below:


Signature

Chief, Tides Branch

GEOGRAPHIC NAMES

Survey No. H-8304

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	
<u>Alaska</u>		}								1
<u>Alaska Peninsula</u>									BH	2
<u>Amak Island</u>										3
										4
<u>Bering Sea</u>									BH	5
										6
										7
										8
<u>Amak Island</u>										9
										10
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										27

Names approved
11-1-57
L. Heck

(tide station)

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ..8304...

Records accompanying survey:

Boat sheets .1....; sounding vols. ...2...; wire drag vols.; bomb vols.; graphic recorder rolls 1-Envelope special reports, etc. .1-Descriptive report and 1-Smooth sheet. .1-Cahier of Shoran Plotting Abstracts, .2-Special Reports with Shoran and Fahtometer Corrections, see Descriptive Report H-8297.

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

Number of positions on sheet		.425..
Number of positions checked		...75..
Number of positions revised		...3...
Number of soundings revised (refers to depth only)		...26..
Number of soundings erroneously spaced		...2...
Number of signals erroneously plotted or transferred		...0...
Topographic details	Time	NONE
Junctions	Time	...12 Hrs.
Verification of soundings from graphic record	Time	8 Hrs

Verification by *E. J. Pace* Total time ...44 HRS. Date 7-21-58

Reviewed by *[Signature]* Time 13 HRS. Date 8 Sept. 1958

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8304

FIELD NO. PF-10156

Alaska - North Side Alaska Peninsula
North of Amak Island

Surveyed: July-August 1956

Scale 1:100,000

Project No. 13750

Soundings:

Control:

808 Depth Recorder

Shoran

Chief of Party - John Bowie

Surveyed by - J. O. Boyer, F. X. Popper, W. E. Randall, and
H. H. Druebert

Protracted by - Ship's officers

Soundings plotted by - H. H. Druebert

Verified and inked by - E. F. Pace

Reviewed by - L. S. Straw

Date 8 Sept. 1958

Inspected by - R. H. Carstens

1. Shoreline and Control

There are no land areas within the limits of this offshore survey.

The origin of 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. A smooth bottom slopes at the rate of 7 feet per mile northwestward from depths of 18 fathoms in lat. $55^{\circ} 35.5'$, long. $162^{\circ} 46.5'$ on the slope of the Alaska Peninsula, to 47 fathoms in lat. $55^{\circ} 49.0'$, long. $163^{\circ} 23.0'$ in the Bering Sea.

4. Junctions with Contemporary Surveys

The junction with H-8302 (1956) on the south is adequate. In accordance with the Project Instructions, junctions were made with prior surveys H-6736 (1940) and H-6791 (1940-41) on the west and southwest. The present survey

is from 1/2 to 1 fathom shoaler in the overlapping areas. The differences in depths in part are due to the fact that no velocity corrections were applied to the present (1956) survey whereas they were applied to the 1940-41 surveys on which the soundings are true depths. For cartographic purposes a butt junction was made with the 1940 surveys.

5. Comparison with Prior Surveys

There are no prior basic surveys in the area by this Bureau.

6. Comparison with Chart 8802 (latest print 7/9/56)

A. Hydrography

The charted hydrography originates principally with track line soundings by this Bureau and U. S. Coast Guard. Other soundings are from early exploratory surveys of unidentified origin, presumably Russian. About half of the charted soundings agree with the present depths; the remainder are from 4 fathoms shoaler to 6 fathoms deeper. The present survey is adequate to supersede all charted information within the common area.

B. Aids to Navigation

No aids to navigation are charted in this open sea area. No dangers to navigation are revealed by the survey.

7. Condition of the Survey

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


8. Compliance with Instructions

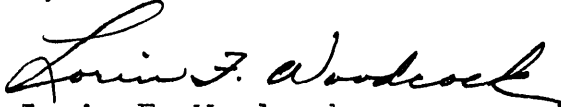
The survey adequately complies with the Project Instructions including the item referred to in the Preliminary Review.


9. Additional Field Work


The survey is considered basic, and no additional field work is recommended.

Examined and approved:


Max G. Ricketts
Chief, Nautical Chart Branch


Lorin F. Woodcock
Chief, Hydrography Branch


Ernest B. Lewey
Chief, Division of Charts


Samuel B. Grenell
Chief, Division of Coastal Surveys

✓ Red FE #5 1947 PATHFINDER - STUDDS
✓ Green FE #10 1948 PATHFINDER - STUDDS
ORX FE #2 1949 PATHFINDER - KNOX

Var 16° E (1937)

Submerged L-1085 (1956)
L-747 (1956)

BERING

8304

162° 00'

56°

ALASKA

PENINSULA

PAVLOF

SANAK IS.

CHART - 8802

SLIME BANK

Unimak Bight

NAUTICAL CHARTS BRANCH

SURVEY NO. H-8304

Record of Application to Charts

[illegible]

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.