

7663



Diag'd. on Diag. Ch. No. 9400

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. AR-4148-W Office No. H-7663

LOCALITY

State Alaska

General locality Arctic Coast

Locality Atanik to Wainwright Inlet

1948

CHIEF OF PARTY

H.A.Paton

LIBRARY & ARCHIVES

DATE January 5, 1949

B-1870-1 (1)

7663



DECLASSIFIED BY NOAA
PURSUANT TO DOC SYSTEMATIC REVIEW
GUIDELINES AS DESCRIBED IN SECTION
3.3(a), EXECUTIVE ORDER 12356.

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.

REG. NO. 7663 Hydro

REGISTER No. H-7663

Field No. AR-4148-W

State ALASKA

General locality ARCTIC COAST

Locality ATANIK TO WAINWRIGHT INLET

Scale 1:40,000 Date of survey Aug. & Sept., 1948

Instructions dated 4 February 1948

Vessel Launches Nos. 3 & 5, Arctic Field Party

Chief of party Hubert A. Paton

Surveyed by V.R. Sobieralski and J.O. Boyer

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

Fathograms scaled by J.J. Rogalski and C.D. Hetherington

Fathograms checked by party personnel

Protracted by Christine N. Hillman

Soundings penciled by Christine N. Hillman

Soundings in ~~xxxxx~~ feet at ~~xxxx~~ MLLW feet at MLLW

REMARKS: Smooth sheet and plotting by Processing Office

Descriptive Report

to Accompany

Hydrographic Survey H-7663 (Field No. AR-4148-W)

Wainwright, Arctic Coast, Alaska

1948

Scale 1/40,000

Hubert A. Paton, Chief of Party

A. Project.- Project CS-320, Supplemental Instructions dated 4 February 1948.

B. Survey Limits and Dates.- This survey extends along the outside coast from Atanik to Wainwright Inlet. The NE limit joins sheet H-7607, scale 1/20,000 executed in 1947, at longitude 159 degrees 19 minutes W. The SW limit joins sheets H-7660, scale 1/20,000, and H-7664, scale 1/40,000, 3 miles SW of Wainwright. The survey extends to about 4 miles offshore. Two dead reckoning lines were run 8 and 10 miles offshore.

Hydrography was begun on 6 August and ended on 6 September. Ice conditions along the coast prevented field work being started earlier. Progress was slow due to unfavorable weather. Signals were built and hydrography was done on sheet H-7660 when weather was not suitable for launch work on this sheet.

C. Vessels and Equipment.- Launches No. 3 and No. 5, 35-foot rearing boats, were used for the entire survey. The launches were equipped with outboard fish and 808 portable depth recorders Nos. 55-S, 73-S, and 106-S. Launch No. 3 worked close to shore and launch No. 5 worked offshore. Both launches were based at a camp established in leased quarters at the entrance to Wainwright Inlet.

D. Tide and Current Stations.- Tidal information was obtained from a portable gage installed in Wainwright Inlet at latitude 70 degrees 35.9 minutes N., longitude 160 degrees 06.5 minutes W. Deeper water sites were available in the entrance, but these were exposed to floating ice which entered the Inlet several times during the season.

The height of MLLW on the staff was 0.7 feet. No corrections for differences in time or height were applied to the observed tides. From 22 August to 24 August the water level was too low to register on the gage. Staff readings were obtained during this extreme low tide.

No current stations were observed. Currents of one knot and less were observed by the sounding launches. The currents varied in velocity and direction.

Page 2.

Descriptive Report - Hydrographic Survey H-7663

E. Smooth Sheet.- The smooth sheet will be prepared by the Seattle Processing Office.

F. Control Stations.- This survey is controlled by 2nd order triangulation executed by the Arctic Shore Party in May and June 1948 and signals located by theodolite cuts and sextant fixes.

G. Shoreline and Topography.- No adequate topographic surveys are available. Shoreline and topographic details may be added from air photographic compilations. It is not known whether or not the Coast and Geodetic Survey photographed this area in 1947.

No topography of this area available at this time.
5-17-49

H. Soundings.- All depths were measured by 808 portable depth recorders. They were recorded in feet except for a small portion of a dead reckoning line where the depths were too great and had to be measured in fathoms.

I. Control of Hydrography.- All hydrography was controlled by sextant fixes on shore objects. [14-30 a (blue) was dead reckoned].

J. Adequacy of Survey.- The survey is complete and adequate to approximately four miles offshore, well beyond the 10-fathom curve. One more dead reckoning line should be run offshore in the center of the sheet to comply with the instructions.

See Par. 8 of Review

Junctions with sheets H-7607, H-7660, and H-7664 are satisfactory. ✓
(1947) (1948) (1948)

K. Crosslines.- Approximately 8 percent of the soundings are on crosslines. The crossings are satisfactory.

L. Comparison with Prior Surveys.- No prior surveys are available for a comparison.

M. Comparison with Chart.- The 10-fathom curve from Wainwright to Pt. Belcher is about 3 miles offshore. Chart 9400 shows this curve about 6 miles offshore. The chart is on too small a scale for further comparisons.

Brought to attention of Nautical Chart Commission.

N. Dangers and Shoals.- No new found dangers or dangerous shoals were found on this sheet.

O. Coast Pilot Information.- A Coast Pilot report will be submitted under separate cover for the entire area surveyed in the 1948 season.

P. Aids to Navigation.- No aids to navigation have been established in the area of this survey.

Q. Landmarks for Charts.- The list of landmarks is submitted on form 567. The Midnight Sun Trading Co. in Wainwright is within the limits of this survey. (1948) C.L. 940

Page 3.

Descriptive Report - Hydrographic Survey H-7663

R. Geographic Names.- A report on geographic names will be submitted for entire area covered in the 1948 season. ✓

Z. Tabulation of Applicable Data. ✓

Attached to this report: ✓

- a. Statistics ✓
- b. Velocity Correction Abstract ✓
- c. Tide Note ✓

Special Reports submitted under separate cover: ✓

- a. Geographic Names
- b. Coast Pilot
- c. Temperature and Salinity
- d. Landmarks for Charts

Respectfully submitted,



John O. Boyer
Lieut.(j.g.), USC&GS

Velocity Correction Abstract

Hydrographic Survey H-7663 (AR-4148W)

Launch 3:

0.2 ft. to 7.0 ft.	
0.0	133.5
-0.2	20.5
-0.4	27.0
-0.6	34.0
-0.8	41.0
-1.0	47.5
-1.2	54.5
-1.4	61.0
-1.6	67.0
-1.8	73.5
-2.0	80.0
-2.2	86.5
-2.4	93.0
-2.6	99.5
-2.8	106.0
-3.0	112.5
-3.2	119.0
-3.4	125.5
-3.6	131.5
-3.8	138.0
-4.0	144.5
-4.2	151.0
-4.4	157.5
-4.6	164.0
-4.8	170.5

Launch 5:

0.4 ft. to 8.0 ft.	
0.2	14.5
0.0	21.5
-0.2	28.5
-0.4	35.0
-0.6	41.0
-0.8	48.0
-1.0	54.5
-1.2	61.0
-1.4	67.5
-1.6	74.5
-1.8	80.5
-2.0	87.0
-2.2	94.0
-2.4	100.5
-2.6	107.0
-2.8	113.5
-3.0	120.5
-3.2	126.5
-3.4	133.5
-3.6	139.5
-3.8	146.5
-4.0	153.0
-4.2	159.5
-4.4	166.0
-4.6	172.5
-4.8	179.0
-5.0	185.0
-5.2	191.5

LIST OF SIGNALS

Hydrographic Survey H-7663 (Field No. AR-4148-W)

Hydrographic Name	Source
AIR	ALTAHR, 1948
AKA	AKAVAT, 1947
ART	Volume 2
BERT	BERT, 1948 4 th order - (Topo stad)
BILL	BILL, 1948 4 th order
BUS	Volume 2
CAR	Volume 2
CHURCH	Belfry, Presbyterian Church, Wainwright, 1948
GALE	GALE, 1948 4 th order
HEP	2 theodolite cuts; sheet H-7660
HER	AMHERST, 1948
JOG	Sheet H-7660
LET	INLET, 1948
MAR	IMARUK, 1947
MOE	MOE, 1948 4 th order
MUL	Sheet H-7607
NAN	NANUK, 1947
NET	Volume 2
NIK	ATANIK, 1947
NUN	NUNAGIAK, 1947
POD	POD, 1948
RAY	RAY, 1948 4 th order
SUN	NW Gable, Midnight Sun Trading Co., 1948
TAN	Volume 4
UMP	Sheet H-7660
UTE	Volume 4
VIK	SAVIK, 1947
VIM	Volume 4
WAIN	WAINWRIGHT, 1947
WARE	Stovepipe, Warehouse, Pt. Collie, 1948
WET	Volume 4
YAK	Volume 2

APPROVAL SHEET

Hydrographic Survey H-7663 (Field No. AR-4148-W)

Frequent inspection of the records and close supervision of the field work were impossible. Sub-parties operated from widely separated camps along the Arctic Coast. The boat sheet and records were examined late in August and again at the close of the field season and are approved. The survey is complete except as noted in the foregoing report.

The smooth sheet is being plotted at the Seattle Processing Office.

Hubert A. Paton

Hubert A. Paton
Comdr., C. & G. Survey
Chief of Party

H-7663 (AR-4148-W)

ARCTIC COAST OF ALASKA - ATANIK TO WAINWRIGHT

PROCESSING OFFICE NOTES

Smooth Sheet

The projection is handmade on Whatman paper. Datum depends on the Barrow astronomic determination of September 1945. All triangulation points are from the field computations of this party in 1948 (Paton - Jeffers, 1948).

Signals "Jog", "Hep" and "Ump" were scaled from H-7660. Other hydrographic stations were plotted from data in volumes 2 and 4, and triangulation lists of directions. Signal "Mul" was transferred from Sheet H-7609 of 1947. No suitable shoreline is available and none appears on the sheet.

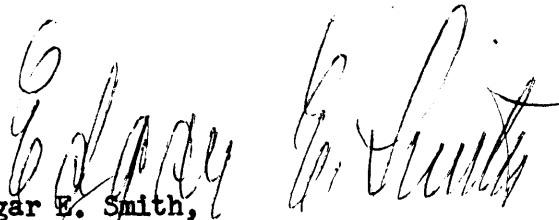
*Shoreline from
T-9007 (1947) part
applied on E. of
present survey.*

Boat Sheet

The boat sheet will be retained for additional work by the field party.

28 December 1948.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Edgar E. Smith". The signature is written in dark ink and is positioned above the typed name.

Edgar E. Smith,
Cartographic Engineer,
Seattle Processing Office.

H-7663 (AR-4148-W)

ARCTIC COAST OF ALASKA - ATANIK TO WAINWRIGHT

GEOGRAPHIC NAMES PENCILED ON SMOOTH SHEET

ALASKA

ARCTIC OCEAN

WAINWRIGHT

WAINWRIGHT INLET

POINT BELCHER

ATANIK

Statistics

for

Hydrographic Survey H-7663 (Field No. AR-4148-W)

Date	Vol.	Day Letter	H.L.Sdgs.	No.Pos.	St.Mi.Sdgs.
Launch No.3:					
Aug. 9	1	a (red)	2	78	27.7
10	1	b	2	115	48.6
14	1	c	-	76	30.1
18	2	d	2	38	13.2
21	2	e	-	27	10.9
23	2	f	-	166	69.5
Sept.6	2 & 3	g	-	75	30.0
Totals			6	575	230.0

Launch No.5

Aug. 9	4	a (blue)	-	64	31.6
10	4	b	-	75	32.8
12	4	c	-	62	21.2
14	4	d	1	83	32.5
18	5	e	-	125	49.6
19	5	f	2	96	35.2
21	5	g	-	64	23.8
23	5 & 6	h	2	150	73.9
Totals			5	719	300.6
Total for survey			11	1294	530.6
Total square st. mi.					139

TIDE NOTE

Hydrographic Survey H-7663 (Field No. AR-4148-W)

Location of tide station: Lat. 70 35.9, Long. 160 06.5

Plane of reference: Mean Lower Low Water, 0.7 feet of the staff.

The soundings on this sheet were reduced to MLW as determined by staff readings and portable tide gage records at Wainwright Inlet.

GEOGRAPHIC NAMES

Survey No.

7663

Name on Survey											
	A	B	C	D	E	F	G	H	K		
											1
<u>Alaska</u>											2
<u>Arctic Coast</u>											3
<u>Atanik</u>											4
<u>Point Belcher</u>											5
<u>Wainwright</u>									USGO		6
<u>Wainwright Inlet</u>											7
<u>Chukchi Sea</u>											8
											9
											10
											11
											12
											13
											14
											15
											16
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											24
											25
											26
											27

Names underlined in
red are approved.
5-27-49. L. Heck

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. **H7663**

Records accompanying survey:

Boat sheets; sounding vols. ...6.; wire drag vols.;
 bomb vols.; graphic recorder rolls & envel.
 special reports, etc. ...List of Hydro. Sea Notes. (Filed under H-7660.)

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

Number of positions on sheet		..1294
Number of positions checked		..156
Number of positions revised	0
Number of soundings revised (refers to depth only)	178
Number of soundings erroneously spaced	7
Number of signals erroneously plotted or transferred	0
Topographic details	Time	...10
Junctions	Time5
Verification of soundings from graphic record	Time	...11

Verification by...^{I. M. Z.} *William H. Lewis* Total time ² 330... Date ⁵⁻²⁶⁻⁴⁹ *Apr. 25, 49*

Reviewed by...*In Jeskind* Time 26... Date 5-26-49

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

19 January 1949

~~Division of Hydrography and Topography~~

Division of Charts: R. H. Carstens

Plane of reference approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 7663

Locality: Wainwright Inlet to Akoliakatat Pass, Alaska

Chief of Party: H. A. Paton in 1948
Plane of reference is mean lower low water, reading
0.70 ft. on tide staff at Wainwright Inlet
2.6 ft. below B. M. 1 (1948)

Height of mean high water above plane of reference is ^{0.50}~~0.40~~ feet.

Condition of records satisfactory except as noted below:

E. C. McKay
Section
Chief, ~~Division of Tides and Currents.~~

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7663

FIELD NO. AR-4148W

Alaska, Arctic Coast, Atanik to Wainwright Inlet
surveyed in Aug. - Sept., 1948 Scale 1:40,000
Project No. CS-320

Soundings:

Control:

808 Fathometer

Sextant fixes on shore signals

Chief of Party - H. A. Paton
Surveyed by - V. R. Sobieralski and J. O. Boyer
Protracted by - O. N. Hillman
Soundings plotted by - C. N. Hillman
Verified and inked by - W. Klein
Reviewed by - I. M. Zeskind, May 19, 1949
Inspected by - R. H. Carstens

1. Shoreline and Signals

The section of shoreline shown on the northeast portion of H-7663 originates with T-9007 (1948). No other topographic surveys in the area of the present hydrographic survey are registered at this time.

The source of the control is adequately discussed in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in adequate agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated except for the low-water curve and portions of the 6-ft. curve, both of which fall close to the high-water line.

The bottom inshore from depths of 36-ft. is very irregular. Offshore from these depths, the bottom is smooth except for occasional irregularity.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-7607 (1947) on the east and H-7660 (1948) on the southwest. The junction with H-7664 (1948) also on the southwest will be considered in the review of that survey.

5. Comparison with Prior Surveys

There are no prior surveys of this area by this Bureau.

6. Comparison with Special Confidential Chart, Arctic Coast
No. 4

a. Hydrography

The hydrography on this chart originates with the present survey prior to verification. Minor corrections of soundings amounting to 1 and 2 feet have been made on the smooth sheet of the present survey during verification and review.

b. Aids to Navigation

No aids to navigation are charted in this area.

7. Condition of the Survey

- a. The Descriptive Report and sounding records are complete and comprehensive.
- b. The smooth plotting was accurately done.
- c. One offshore sounding line has yet to be run as mentioned in paragraph J of the Descriptive Report.

8. Compliance with the Project Instructions

The survey adequately complies with the Project Instructions.


9. Additional Field Work Recommended

This is a good basic survey. The offshore sounding line mentioned in paragraph 7 C will probably be run during the 1949 field season.

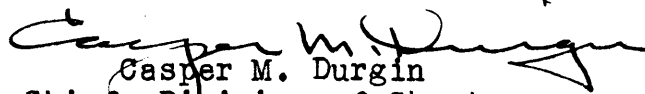
Examined and approved:


H. R. Edmonston

Chief, Nautical Chart Branch


K. G. Crosby

Chief, Section of Hydrography


Casper M. Durgin

Chief, Division of Charts


W. M. Scaife

Chief, Division of Coastal Surveys

