

RESTRICTED

7661

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-2248-W Office No. H-7661

LOCALITY

State Alaska - Arctic Coast

General locality Kasegaluk Lagoon

Locality Vicinity of Pingorarok Pass

194 8

CHIEF OF PARTY

H.A.Paton

LIBRARY & ARCHIVES

DATE January 5, 1949

B-1870-1 (1)

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

RESTRICTED

7661

Jan. 5, 1949

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.

REG. NO. H-7661

REGISTER No. H-7661

Field No. AR-2248-W

State Alaska - Arctic Coast

General locality Kasegaluk Lagoon

Locality Vicinity of Pingorarak Pass

Scale L; 20,000 Date of survey September 1948

Instructions dated 4 February 1948

Vessel Launch #2 Arctic Shore Party

Chief of party Hubert A. Paton

Surveyed by Karl B. Jeffers

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

Fathograms scaled by Charles Kuranko

Fathograms checked by Karl B. Jeffers

Protracted by Clarence R. Lehman

Soundings penciled by Clarence R. Lehman

Soundings in ~~fathoms~~ feet at ~~MLLW~~ MLLW

REMARKS:

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.....
.....
.....
.....

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SHEET NO. AR-2248-W H-7661
KASEGALUK LAGOON EAST OF NOKATLEK POINT
ARCTIC COAST OF ALASKA
SEPTEMBER 1948
SCALE 1 : 20,000
HUBERT A. PATON, CHIEF OF PARTY

A. PROJECT: The survey is a part of Project CS-320, basic surveys of the Arctic Coast of Alaska, authorized in the Supplemental Instructions dated 4 February 1948. ✓

B. SURVEY LIMITS AND DATES: The sheet covers the northeast end of Kasegaluk Lagoon east of Nokatlek Point and the pass into the Arctic Ocean. Junctions were made with Sheet AR-2248-W^{H-7661 (1948)} at the pass and Sheet AR-2348-W^{H-7662 1948} at the western limits of the survey. Field work was done between 1 and 14 September 1948. ✓

C. VESSEL AND EQUIPMENT: A leased launch was used for the survey and was operated from the base camp at Nevat Point. Soundings were taken with an 808 type recorder No. S-109 using an outboard fish. ✓

D. TIDE AND CURRENT STATIONS: A portable automatic tide gage and staff were maintained at the base camp. Lack of equipment and personnel prevented establishment of a supplemental station in this end of the lagoon, but it is believed that time and range factors are very small and of no significance. ✓

No current observations were made in this area. ✓

E. SMOOTH SHEET: The smooth sheet will be plotted at the Seattle Processing office. ✓

F. CONTROL STATIONS: The control is based on second order triangulation established by this party in 1948. Hydrographic signals were cut in by theodolite from triangulation stations and supplemented by *sextant fixes recorded at the time the signals were built. * Fixes recorded in sdg. volumes of present survey. ✓

G. SHORELINE AND TOPOGRAPHY: The shoreline and topography will be compiled from air-photographs at a later date. No plane table surveys were executed by this party. Field notes were recorded to assist in the identification of control when the area is photographed. The range of the tide was too small to permit the delineation of the low water line by hydrographic means. ✓

H. SOUNDINGS: Soundings were recorded in feet on an 808 type recorder. ✓

I. CONTROL OF HYDROGRAPHY: Soundings were fixed in position by sextant angles on shore signals. ✓

J. ADEQUACY OF SURVEY: The survey is complete and adequate for the area involved. It might be possible to run a few more lines at the entrance to the lagoon under favorable conditions of sea and tide. ✓

K. CROSSLINES: Crosslines comprise at least 8% of the total miles of sounding line. The crossings are good. ✓

L. COMPARISON WITH PREVIOUS SURVEYS:

NO previous surveys in the area covered. ✓ ✓

M. COMPARISON WITH CHART:

There are no soundings in the area on Chart No. 9400. | Review, par. 6

N. DANGERS AND SHOALS:

There are shoal banks on each side of the narrow entrance to the lagoon and passage to east or west is restricted by sand bars. Further development of the bar at the west side of the entrance will be made when this survey is completed on Sheet No. AR-4248-W. (H-7664, 1948) ✓

O. COAST PILOT INFORMATION: See special report on Coast Pilot Notes. ✓ ✓

R. GEOGRAPHIC NAMES: See special report on Geographic Names. The only new place name in the area is Pingorarak Pass. S R 117(48) ✓

Z. TABULATION OF APPLICABLE DATA:

(a) Attached hereto:

- 1 Tabulation of statistics
- 2 Tide Note
- 3 Velocity correction abstract.

(b) Special reports submitted under separate cover. ✓

1. Geographic Names 814 ✓
2. Coast Pilot Notes
3. Temperature and salinity observations
4. Landmarks for charts.

Respectfully submitted,

Karl B. Jeffers

Karl B. Jeffers
Lt. Comdr., C. & G. Survey

APPROVAL SHEET

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-7661 - (AR-2248-W)

KASEGALUK LAGOON - EASTERN PART

PROCESSING OFFICE NOTES

Smooth Sheet

The projection is hand made on Whatman paper. ✓

Datum is Barrow Astro of September 1945. ✓

Hydrographic signals were located by sextant angles in volumes 1 and 2, and by theodolite directions from triangulation stations.

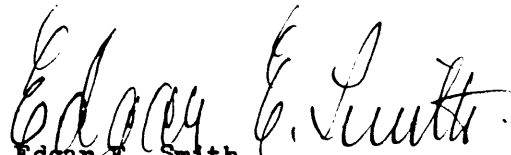
All triangulation is the current work of this party. ✓

Controlling Depths

Seven feet can be carried through Pingorarak Pass into the southwestern part of this survey. Five feet can be carried into the northeastern part. The long, narrow spit which constricts the lagoon at Latitude $70^{\circ}22.4'$ was transferred from the boatsheet. Along the seaward side there are indications in the depth curves and soundings of channels into inlets which are now closed. ✓

31 December 1948.

Respectfully submitted,


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

H-7661 - (AR-2248-W)

ARCTIC COAST OF ALASKA

KASEGALUK LAGOON - EASTERN PART

GEOGRAPHIC NAMES

ARCTIC OCEAN

KASEGALUK LAGOON

PINGORAROK PASS

NOKOTLEK POINT

NOKOTLEK RIVER

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TIDE NOTE

SHEET NO. AR-2248-W

Location of tide station: Lat. 70 15.0, Long. 161 21.8

Plane of reference: Mean Lower Low Water, 2.3 feet of the staff.

The soundings on this sheet were reduced to M. L. L. W. as determined by staff readings and portable automatic tide gage records at Nevat Point in Kasegaluk Lagoon.

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STATISTICS- SHEET NO. AR-2248-W
Kasegaluk Lagoon, east of Noketlek Point
Arctic Coast of Alaska

Date 1948	Day	Vol.	Positions	Sta. Mi. Line	H. L. Sdg.
Sept. 1	a	1	85	24.7	
" 2	b	1	73	20.2	
" 3	c	1	92	24.0	5
" 8	d	1 & 2	78	24.7	2
" 9	e	2	54	12.3	6
" 10	f	2	11	2.6	
" 14	g	2	47	8.0	1
<hr/>					
Totals		2	440	116.5	14

Area: 10.2 square statute miles

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LIST OF SIGNALS SHEET NO. AR-2248-W
Kasegaluk Lagoon
Arctic Coast of Alaska 1948

Hydrographic Name	Source
Base	SHELTER S. W. BASE 1948
Cat	Theodolite cuts
Ear	Theodolite cuts
Fad	" "
Key	2 " and sextant angles
Lyons	LYONS 1948
May	Sheet No. AR-2248-W
Ned	" " "
Nok	NOKULIK 1948
Oslo	OSLO 1948
Per	PERTH 1948
Ran	RANGE 1948
Rome	ROME 1948
Sam	Page 80, Vol. 2
She	SHELTER N. E. BASE, 1948
Yam	Theodolite cuts and sextant angles.

GEOGRAPHIC NAMES

Survey No. **77661**

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
<u>Alaska</u>												1
<u>Arctic Ocean</u>												2
<u>Kasegaluk Lagoon</u>												3
<u>Pingorarak Pass</u>												4
<u>Nokotlek Point</u>												5
<u>Nokotlek River</u>												6
												7
												8
												9
												10
<u>Nevat Point</u>												11
												12
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												27

Names underlined in red are approved. 2/2/49. L. Heck

(location of tide staff)

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. **H7661**

Records accompanying survey:

Boat sheets ...¹...; sounding vols. ...²...; wire drag vols.;
 bomb vols.; graphic recorder rolls ³envel.
 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	.....	440
Number of positions checked	.....	93
Number of positions revised	.....	6
Number of soundings revised (refers to depth only)	.....	* 119 * Review, par. 7C.
Number of soundings erroneously spaced	.....	45
Number of signals erroneously plotted or transferred	.....	—
Topographic details	Time	None
Junctions	Time	2 hrs
Verification of soundings from graphic record	Time	10 hrs

Verification by Earl M. Bragonje..... Total time 157..... Date April 19, 1949

Reviewed by J.A. Dinsmore..... Time 14 hrs..... Date Aug. 5, 1949

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
2 volumes of sounding records for

HYDROGRAPHIC SHEET 7661

Locality - Kasegaluk Lagoon, Alaska

Chief of Party: H. A. Paton in 1948
Plane of reference is mean lower low water, reading
2.3 ft. on tide staff at Nevat Point
7.3 ft. below B. M. 1 (1948)

Height of mean high water above plane of reference is 0.50 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-7661

FIELD NO. AR-2248W

Alaska, Arctic Coast, Kasegaluk Lagoon
Surveyed in September, 1948 Scale 1:20,000
Project No. CS-320

Soundings:

808 Fathometer

Control:

Sextant fixes on shore signals

Chief of Party - H. A. Paton
Surveyed by - K. B. Jeffers
Protracted by - C. R. Lehman
Soundings plotted by - C. R. Lehman
Verified and inked by - E. M. Bragonje
Reviewed by - T. A. Dinsmore, August 5, 1949
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline will be added to the present survey when air-photographic surveys of this area are completed.

The source of the control is adequately covered 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 were adequately delineated. Determination of the low-water line and complete delineation of the 6-ft. curve was prevented by their proximity to the shoreline and the low range of tide (0.5 ft.). The sketched sections of low-water line in the vicinity of Pingorarak Pass are from the boat sheet of the present survey.

The bottom is generally smooth. Shoal banks closely border the narrow entrance into the lagoon. Passage within the lagoon is also restricted by jutting sand bars particularly in the vicinity of lat. $70^{\circ} 22.45'$, long. $160^{\circ} 48.2'$.

4. Junctions with Contemporary Surveys

An adequate junction was effected with H-7662 (1948) on the southwest. The junction with H-7664 (1948) on the northwest will be considered in the review of that survey. The shoal northeastern end of the lagoon remains unsurveyed.

5. Comparison with Prior Surveys

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

6. Comparison with Arctic Chart No. 5 (Confidential) Print date 5/2/49)
Arctic Chart No. 6 (Confidential) Print date 5/16/49)

A. Hydrography

Charted hydrography originates with the present survey prior to verification and review. Numerous 1-ft. corrections were made to smooth-sheet soundings during verification. The present survey, therefore, supersedes the charted information.

B. Aids to Navigation

No aids to navigation are charted in this area.

7. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth plotting was well done.
- c. A minus 0.3 ft. correction resulting from the bar check of "a" day was applied to the soundings of that day during verification of the survey in this office. This correction eliminated minor differences of depths at crossing and improved the delineation of the depth curves.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

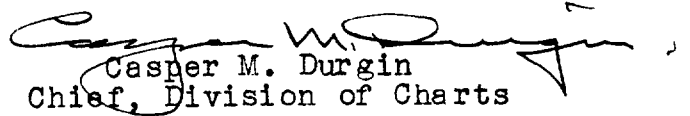
This is a basic survey and no additional field work is recommended.

The northeastern end of the lagoon, as mentioned above in paragraph 4, is shoal and is not considered of sufficient importance to warrant surveying.

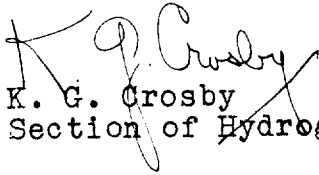
Examined and approved:



H. R. Edmonston
Chief, Nautical Chart Branch



Casper M. Durgin
Chief, Division of Charts



K. G. Crosby
Chief, Section of Hydrography



W. M. Scaife
Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. H.7661

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
Mar 1949	Arctic Chart #5	M. M. Kegan	Inspected After Review - Corr'n added to Ch. 1/11/50 HTE Before After Verification and Review
Mar. 1949	Arctic Ch. # 6	Stirni	Before V. & R.
7/49	9400	B. Risigari	Before After Verification and Review <i>before applied thru Arctic Ch. #5.</i>
7 Dec 54	9459	Lonest H. Bell	Before After Verification and Review <i>Completely Applied</i>
14 Dec 54	9460	Lonest H. Bell	Before After Verification and Review <i>Completely Applied</i>
			Before After Verification and Review
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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.