

7672

Diag. Cht. No. 8502-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. PF-2648 Office No. H-7672

LOCALITY

State Alaska

General locality Bristol Bay - Kvichak Bay

Locality Off Cape Chichagof

194 8-'49

CHIEF OF PARTY

R.F.A. Studds & R.W. Knox

LIBRARY & ARCHIVES

DATE 28 NOV. 1949

B-1870-1 (1)

7672

APR 19 1949

Form 537
(Ed. June 1946)

117672

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 7672 (1948-49)

Field No. Pf 2548

State Alaska

General locality Bristol Bay, - Kvichak Bay, East side

Locality Off Cape Chichagof

Red Bluff Light to Middle Bluff Light

Scale 1/20,000 Date of survey 8 June to 9 July 1949
7 Aug. to 9 Sept. 1948

Instructions dated 20 June 1946, Supp. 3/24/47, 4/7/48 and 4/13/49

Vessel PATHFINDER

Chief of party R.F.A. Studds and R.W. Knox

Surveyed by J. O. Phillips, J. Plaggmier, R.C. Bolstad, E.C. Baum, J.C. Mathisson, A.L. Wardwell, G.D. Scott, E.H. Sheridan, N.E. Taylor, R.C. Darling

Soundings taken by fathometer, graphic recorder, hand lead wire

Fathograms scaled by Johnson Wallitner Savidge

Fathograms checked by JOP GDS LSS JRP ASL LOW RLW

Protracted by Clarence E. Pedersen, R.E. Latta, R.K. De Lawder

Soundings penciled by Clarence E. Pedersen, R.E. Latta, R.K. De Lawder

Soundings in ~~YXHSXX~~ feet at ~~MLWX~~ MLLW

REMARKS: This is an unfinished sheet. Additional field work is planned for 1949 season.

No report was prepared by the field party for this incomplete ¹⁹⁴⁸ sheet. They plan to write the report after the 1949 field season.

No report submitted for 1948 work

As the sheet has been plotted to date it is now forwarded to Washington. If the additional field work of 1949 justifies, the return of the sheet will be requested for plotting the new work.

1949 work plotted in Wash. office

E. F. Smith
E. F. Smith
Seattle Processing Office
4/6/49

FATHOMETER CORRECTIONS FOR 1948 SEASON

SHIP PATHFINDER

Project CS 327

Portable 808-type fathometers were used for sounding during the entire 1948 season. Bar check corrections were obtained for each fathometer by meaning all the bar checks taken on that fathometer for the entire season, regardless of the launch or boat sheet used. In addition, for the fathometer used for Ship soundings the fathometer comparisons (vertical casts) were meant in conjunction with the bar checks.

During the field season an abstract was maintained on the bar checks against the fathometer number. The corrections were individually plotted on graph paper and a mean curve obtained. A study of the curves show negligible variances during the season. The temperature and salinity observations follow this in showing, outside of the surface layer, constant velocity corrections for the entire season. The T & S curve approximates the bar check curves closely. Since there are inherent instrumental characteristics the bar check curves were held rather than the T & S curves. Corrections are in units of 0.5 feet in accordance with Director's letter 24 December 1947, No. 36-mr.

The fathometer installations for the PATHFINDER'S launches are all practically the same, with inboard units. For ease of operation the initial was held on one foot for all launch work and the bar check curves were drawn from this point. Initial corrections were applied when the initial drifted off the one-foot line. No instrumental (electrical) changes were made during the season outside of replacement of weak tubes. The B and C scale corrections were obtained at the time the bar check was made, when possible. Vertical casts for the Ship were plotted in different colors for the three scales and the corrections were obtained from this curve. The draft was set for the initial for all Ship work. Insufficient data was obtained for Fathometer No's. 61 and 68 on the working grounds and the B scale corrections were taken in Lake Washington, Seattle. For only a few soundings were the bar check curves extended beyond the limits allowed by the manual, and apparently reliable vertical casts were used for verification.

At the beginning of the season all launches had a common bar - a six foot by eight inch drilled plate supported by a steel frame. One of these bars was lost and either a three inch pipe seven feet long or a four foot by eight inch flat plate was used instead. All bar lines were of tiller cord marked in five foot intervals. All lines (both bar and hand lead) were new at the beginning of the season. For the first month sufficient line comparisons were not taken and several bar checks were rejected. After the lines became stable the bar checks with the first bar proved adequate and reliable. The handlead lines were not remarked in the field and all handlead soundings should not be plotted unless corrected.

SUMMARY OF VELOCITY CORRECTIONS 1948

<u>Fathometer</u>	<u>A Scale</u>	<u>B Scale</u>
No. 46	Zero to 65'	+2.0' to 65' +2.5' to 90'
No. 59	-0.5' to 18' -1.0' to 44' -1.5 to 67'	-2.5 to 44' -3.0 to 67' -3.5 to 91'
No. 61	0.0 to 15' + 0.5 to 48' +1.0 to 82'	-1.0 to 48' -0.5 to 82'
No. 68	Zero to 72'	-0.5 to 72'
No. 74	0.0 to 16.5' -0.5 to 37' -1.0 to 58' -1.5 to 74'	-1.5 to 37' -2.0 to 53' -2.5 to 74'
No. 130 S	0.0 to 2.5' -0.5 to 19.0' -1.0 to 39.5' -1.5 to 63.0' -2.0 to 115.0'	(B & C Scale) -1.0 to 39.5' -1.5 to 63.0' -2.0 to 115.0'

T & S (theoretical) Curves

0.0 to 20'
-0.5 to 48'
-1.0 to 79'
-1.5 to 109'

H 7672
Pf 2848

Kvickak Bay - North of Egegik River.

Processing Office Notes.
for 1948 work

The field work on this sheet is incomplete. The Boatsheet has been returned to the field party.

Smooth Sheet.

The projection is hand made on K & E paper N 124 H. Triangulation stations are from the field computations of Tribble 1946 and Studds 1948. Topographic signals are from T 7085. Hydrographic cuts are recorded in the sounding records.

Crossings.

Good. That is the discrepancies at crossings are no greater than differences between adjacent soundings in the same line. One exception is noted at Lat. 58 23 Long. 157 39.7 where line 5h to 8h is about four feet shoaler than crossed lines.

Discrepancy eliminated
by application of revised
tide reducers

New tide curves filed with fathograms

Shoreline.

No acceptable shore line is available for this sheet at the processing office. As it was not furnished on request it is presumed it is not yet plotted.

T 9076 later received. Review, par. 1.
Shoreline transferred to
smooth sheet.

Edgar E. Smith

Cart. Engr. 3/24/48

TIDAL NOTE

REGISTER NO. H-7672 (PF-2648)

The tides reduced in accordance with the Special Tide Report of Commanding Officer, Ship PATHFINDER, dated 17 November 1948 for Project CS-327. The reductions being based on the Portable Automatic Tide Gage at Clarks Point, Nushagak Bay. Two ship fathometer tide stations were effected in the area to ascertain the proper tidal correction factors. Fathometer Tide Station #5 was at Lat. $58^{\circ}15.5'$ N and Long. $157^{\circ}41.1'$ W; Fathometer Tide Station #6 was at Lat. $58^{\circ}25.6'$ N and Long. $157^{\circ}47.7'$ W.

Clarks Point Tide Gage Lat. $58^{\circ}50.95'$ N and Long. $158^{\circ}33.1'$ W

1948 Season

STATISTICS FOR HYDROGRAPHIC SHEET H-7672 (PF-2648)

DATE	DAY	VOLUME NUMBER	NUMBER POSITIONS	STAT.MI. SDG.LINE	HAND LEAD SOUNDINGS
<u>Launch No. 1</u>					
7 August 1948	a✓	1	144	40.7	
8 August 1948	b✓	1,2	142	34.4	
10 August 1948	c✓	2	144	37.2	
20 August 1948	d✓	2	5	1.3	
21 August 1948	e✓	2,3	43	12.3	
4 Sept. 1948	f✓	3	101	27.3	
5 Sept. 1948	g✓	3,4	170	47.5	
7 Sept. 1948	h✓	4	98	19.9	
8 Sept. 1948	j	4	44	12.6	
9 Sept. 1948	k✓	4,5	<u>73</u>	<u>19.6</u>	
			TOTAL	964	252.8
<u>Launch No. 2</u>					
8 August 1948	a✓	1	123	44.3	
10 August 1948	b✓	1,2	<u>136</u>	<u>48.2</u>	
			TOTAL	259	92.5
<u>Launch No. 3</u>					
20 August 1948	a✓	1	42	8.0	
4 Sept. 1948	b✓	1	35	7.2	
5 Sept. 1948	c✓	1	154	35.8	
7 Sept. 1948	d✓	2	45	10.5	
8 Sept. 1948	e✓	2	34	10.3	
9 Sept. 1948	f✓	2	<u>66</u>	<u>16.8</u>	
			TOTAL	376	88.6
<u>Launch No. 4</u>					
21 August 1948	a✓	1	<u>42</u>	<u>10.4</u>	
			TOTAL	42	10.4
		GRAND TOTAL	1641	444.3	

H 7672
Pf 2648

Bristol Bay Alaska

List of Geographic Names.

Kvichak Bay

Egegik^K River Entrance

Goose Point

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

June 7, 1949

~~Division of Hydrography and Topography:~~

Division of Charts: R. H. Carstens

Plane of reference approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 7672

Locality Kvichak Bay, Bristol Bay, Alaska

Chief of Party: R. F. A. Studds in 1948
Plane of reference is mean lower low water, reading
3.9 ft. on tide staff at Clark Point
25.8 ft. below B. M. 5 (1947)

Height of mean high water above plane of reference is 17.8 feet.

Condition of records satisfactory except as noted below:

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

NOTES FOR DESCRIPTIVE REPORT TO ACCOMPANY

1949 FIELD WORK

HYDROGRAPHIC SURVEY H-7672

FIELD NO. PF- 2648

Scale: 1: 20,000

USC&GSS PATHFINDER

ROBERT W. KNOX, COMDG.

The following notes cover only the supplemental 1949 season's work on this sheet; they are intended to supplement the descriptive report proper.

A - PROJECT

Project No. CS-327, General Instructions dated 20 June 1946. Supplemental Instructions dated 24 March 1947, 7 April 1948 and 13 April 1949.

B - SURVEY LIMITS AND DATES

The 1949 field work on this sheet consisted of splits and filling in small open areas left in the 1948 work between latitudes 58°-15' to 58°-26', Egegik River entrance to Middle Bluff. The 1949 field work began 8 June and ended 19 June, non-continuous. This sheet joins H-7667 on the west, H-7666 on the north, and H-7167 adjacent to the Egegik River.
1947-48 1946

C - Vessels and Equipment

The PATHFINDER'S motor launches nos. 1 & 2, operating from the ship, ^{at the ship "Pathfinder"} were used for this survey.

Fathometers of the 808 type were used, calibrated to a velocity of 820. Launch no. 1 used fathometer no. 74-S while launch no. 2 used no. 59. "A" scale was used for all days except on June 19th, "d" day, when "B" scale was used at the start of the day, for depths up to 50 feet

Launch #4 used fathometer No. 46
Pathfinder " " " " No. 305

D - TIDE AND CURRENT STATIONS

A fathometer tide gage was maintained at Protection Point during the period of operations on this sheet which was prior to the establishment of the Clarks Point gage. However, tide reducers for this sheet were obtained from actual observations at stations nos. 5 & 6 as explained in the special Tide Report dated 10 October 1949; this was approved in the Director's letter dated 24 October 1949, subject: Tides, Bristol Bay, Alaska, 1949, ref. 36-tmo. No current stations were observed in this area during 1949.

E - SMOOTH SHEET

The smooth sheet, prepared in 1948, is on file in Washington Office.

Records of the 1949 field work are to be plotted in the Washington Office in accordance with letter dated 18 October 1949, reference 22/ MEK, S-1-PF. ✓

F - CONTROL STATIONS

Control stations established and used in 1948 were recovered and used in 1949. In addition two new hydrographic stations were established in 1949; these stations, UP & GLO, are indexed on pge 2 of vol. 11 for 1949. ✓ They were located by sextant cuts from the Pathfinder's launch no. 2 on June 8, 1949.

G- SHORELINE AND TOPOGRAPHY

See the 1948 report for this sheet. (Processing office notes of 1948)

H - SOUNDINGS

Soundings were recorded in feet and tenths. The red values entered in the sounding record in the "Soundings" column were entered by the scanner aboard ship after the completion of the day's work. The fractional value shown in red in the "position" column represents the fractional distance ✓ from the preceeding sounding (i.e., 0.3 would mean three-tenths of the 30 second sounding interval or nine seconds after the preceeding sounding as listed.

When the fathometer index settings varied from the established setting, as shown on the velocity correction sheets attached to this report, by only a couple tenths the additional correction was disregarded; this is consistent ✓ with the accuracy of the readings as is evidenced by abstract data included in the Velocity Correction Report for 1949 by the PATHFINDER.

I - CONTROL OF HYDROGRAPHY

Sextant fixes were used to control the positions of all sounding lines. ✓

J - ADEQUACY OF SURVEY

Junctions to adjoining sheets are considered satisfactory as far as can be ascertained from the boat sheet; predicted tides off Middle Bluff were used to reduce the soundings. There may^{be} some variance from the ✓ actual tides and comparison with the smooth sheet soundings in the DC office.

The beach gradient is regular so where spacing of inshore sounding lines is spread the MLLW line may adequately be determined by proportion from soundings.

K - CROSSLINES

This will have to be ascertained in the Washington office when the 1949
(see Review par. 2.)

work is plotted on the smooth sheet now in DC. On the boat sheet the 1949 hydrography appears to fit in well with the 1948 work except in a few places where it appears the*1948 tide reducer^s was in error; it should be remembered that actual tide observations were used in the 1949 hydrography (predicted tides at Middle Bluff were used for the boat sheet; they show a couple feet difference from the observed as entered in the sounding volumes).

* Tide reducers revised; see Review, par. 7b.

L - COMPARISON WITH PREVIOUS SURVEYS

Covered by 1948 work on this sheet. The 1949 work consisted of filling in splits which agree well with the 1948 work.

M - COMPARISON WITH CHART

No soundings are shown on chart 8802 (17th edition, August 1944) for this inland area. However the dotted three-fathom curve on the chart is shown too far offshore, particularly in the position of the "PD" at latitude $58^{\circ} 20'$, longitude $157^{\circ} 40'$ which was disproved on hydrographic survey, field no. PF-4147, reg. no. H-7667. Review,
par. 6A.

1947-49

N - DANGERS AND SHOALS

Most of the shoals for this sheet have been covered in 1948. A five foot shoal at lat. $58^{\circ} 24.25'$, long. $157^{\circ} 33.2'$ was discovered in 1949; this lies about one mile off-shore in an area of irregular bottom.

^{1-ft. on smooth sheet}
The zero sounding determined on the boat sheet in 1948 at lat. $58^{\circ} 20.6'$, long. $157^{\circ} 34.6'$ was investigated by two split lines which showed a shoaling on the inshore line of 5 feet between positions 64 and 65 "d" (purple) day.

The 1949 sounding line, positions 90 to 96 "c" (purple) day was run along the outer edge of the shoal off Egegik River entrance; this line was run as close inshore to the shoal as the swell and breakers permitted with safety.

pos. 90 ϕ $58^{\circ} 17.65'$
 λ $157^{\circ} 35.45'$

O - Coast Pilot Information

Coast Pilot Notes for Bristol Bay, Alaska, were forwarded to the DC office 14 October 1949.

During the 1949 work it was noted that winds from the eastern quadrant were considerably more pronounced at the south end of the work in the vicinity of Egegik Bay, appearing to "funnel through the Egegik Bay pass."

P - AIDS TO NAVIGATION

The black "N2" bouy shown at the entrance to Egegik Bay on the boat sheet in 1948 has been shifted in position in 1949 as shown on ^{present survey} ~~PF-4147~~ (reg. no. H-7667) to $58^{\circ} 15.5'$, $157^{\circ} 40.2'$. A black can bouy "C1" was used in 1949 for the temporary marker maintained from May to August.

Q - LANDMARKS FOR CHARTS

Landmarks for charts have been submitted for both the 1948 and 1949 field seasons. ✓

R - GEOGRAPHIC NAMES

Reports have been submitted for both 1948 and 1949. ✓

S - TABULATION OF APPLICABLE DATA

(a) Attached to this report:-

1. Tabulation of statistics - - 1949.
2. Fathometer Corrections - - 1949.
3. List of signals - - 1949.
4. (Tidal note covered under paragraph D). ✓

(b) Reports submitted under separate cover:-

1. Report on Tides submitted 10 October 1949
2. Geographic Names submitted 14 October 1949
3. Landmarks for Charts submitted 14 October 1949
4. Coast Pilot Information submitted 14 October 1949
5. Report on Fathometer Corrections, Part I - 1949 submitted 10 November 1949

Submitted-



Roswell C. Bolstad, Lt. Comdr., USC&GS

Approved and forwarded:-



Robert W. Knox, Comdr. USC&GS
Comdg. Officer, SS PATHFINDER
Chief of Party

VELOCITY CORRECTIONS FOR PATHFINDER LAUNCH NO. 2

(808 Type Fathometer No. 59)

For month of June 1949 only

(From curve "A" - Vel. 1468.1 m/sec. or 802.8 fms/sec.)

DEPTH IN <u>FEET</u>	VELOCITY CORRECTION, FT. (Index setting 1.1 ft.)*		
	<u>"A" SCALE</u>	<u>"B" SCALE**</u>	<u>"C" SCALE**</u>
0-12.0	0.0		
12.5-36.0	-0.5		
36.5-60.0	-1.0	0.0	
60.5-83.5		-0.5	0.0
84.0-107.5			-0.5

For months of July, August, and September 1949 only:

(From curve "B" - Vel. 1479.9 m/sec. or 809.2 fms/sec.)

DEPTH IN <u>FEET</u>	VELOCITY CORRECTION, FT. (Index setting 1.1 ft.)*		
	<u>"A" SCALE</u>	<u>"B" SCALE**</u>	<u>"C" SCALE**</u>
0-19.0	0.0		
19.5-57.5	-0.5	0.5	
58.0-95.0		0.0	+ 0.5
95.5-133.0			0.0

* Apply correction for any different setting.

** Includes phase corrections: "B" Scale = 1.0 ("B" Scale reads 1.0 ft. less than "A" Scale).

"C" Scale = 1.5 ("C" Scale reads 0.5 ft. less than "B" Scale).

For velocity corrections for fathometers #305 (used by Pathfinder in 1949 and #46 used by Launch #4 in 1949 see D.R. H-7667 (1947-49)

VELOCITY CORRECTIONS FOR PARFLUXER LAUNCH NO. 1

(808 Type Fathometer No. 74-8)

For month of June 1949 only:

(From curve "A" - Vel. 1468.1 m/sec. or 802.8 fms/sec.)

<u>DEPTH</u> <u>IN</u> <u>FEET</u>	<u>VELOCITY CORRECTIONS</u> (Index setting 1.0 ft.)*	
	<u>"A" SCALE**</u>	<u>"B" SCALE**</u>
0-12.0	0.0	
12.5-36.0	-0.5	-1.5
36.5-60.0	-1.0	-2.0
60.5-83.5		-2.5
84.0-107.5		-3.0

For months of July, August and September 1949 only:

(From Curve "B" - Vel. 1479.9 m/sec. or 809.2 fms/sec.)

<u>DEPTH</u> <u>IN</u> <u>FEET</u>	<u>VELOCITY CORRECTION, FT.</u> (Index setting 1.0 ft.)*	
	<u>"A" SCALE**</u>	<u>"B" SCALE**</u>
0-19.0	0.0	
19.5-57.5	-0.5	-1.5
58.0-95.0		-2.0

* Apply correction for any different setting.

** Includes phase correction of -1.0 for "B" Scale readings ("B" Scale reads 1.0 ft. more than "A" Scale.).

LIST OF SIGNALS

SHEET H-7672 (PF-2648)

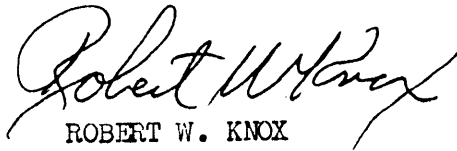
1949 SEASON

<u>NAME</u>	<u>SOURCE</u>
BUG	Triangulation 4th Order, R.F.A.S. - PATHFINDER 1948
Joe	" " " " " "
LUK	" " " " " "
PED	" " " " " "
DIM	Triangulation station MIDDLE 1946
RED	" " RED BLUFF LIGHT 1946
SHE	Graphic 1948
GLO	Hydrographic 1949 (In 1949 vol. I).
UP	" " " " " "
BAD	" 1948.
BOX	" "
TIT	" "
EVA	" "

(Sta. PEPER) { Also
1948
by C. Lefevre
1st Order

APPROVAL SHEET

The additional work^{of 1949} on hydrographic survey H-7672⁽¹⁴²⁸⁻⁴⁹⁾ was accomplished under my occasional supervision. The records and reports have been inspected and approved. No additional work is considered necessary.



ROBERT W. KNOX
Comdr., C&GS
Cmdg., Ship PATHFINDER

STATISTICS FOR HYDROGRAPHIC SHEET H-7672 (1949 SEASON)

<u>Date</u> 1949	<u>Day</u> <u>Letter</u>	<u>Vol.</u>	<u>Positions</u>	<u>Statute Miles</u> <u>Sounding Line</u>
June				
8	a (purple)	1	73	16.3
13	b (")	1	173	47.3
16	c (")	2	160	43.4
19	d (")	2	88	23.0
10	l (blue)	3	75	23.2
19	b' (blue)	3	<u>12</u>	<u>5.0</u>
		TOTALS	581	158.2

Note:- Area consists of splits of 1948 work; no area claimed.

STATISTICS FOR HYDROGRAPHIC SHEET H-7672 (1949 Season)

<u>Date</u> 1949	<u>Day</u> <u>Letter</u>	<u>Vol.</u>	<u>Positions</u>	<u>Stat. Miles</u> <u>Sdg. Lines</u>
June				
16	A (blue)	14	80	36.5
16	m (blue)	15	100	30.9
19	n (blue)	15	69	20.4
July				
6	p (blue)	15	47	9.7
6	g (green)	16	47	8.6
9	h (green)	16	40	10.2
9	q (blue)	17	52	12.6
	Totals		<u>435</u>	<u>128.9</u>

639

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

15 December 1949

~~Division of Hydrography and Topography~~

Division of Charts: R. H. Carstens

Plane of reference approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 7672

Locality Bristol Bay, Alaska

Chief of Party: R. W. Knox in 1949

Plane of reference is mean lower low water, reading

~~from tide staff at
Stocks Bay~~

20.3 ft. on fathometer at Station No. 5 (off Middle Bluff Light, Kvichak Bay)
35.5 ft. on fathometer at Station No. 6 (Whale boat off Middle Bluff).

NOTE: For all soundings in C zone use actual tides of stations 5 and 6 uncorrected.

For soundings in B zone use tides of stations 5 and 6 with same range but apply time difference $\begin{cases} \text{HW} = -0.3 \text{ hr.} \\ \text{LW} = -0.6 \text{ hr.} \end{cases}$

For soundings in A zone use tides of stations 5 and 6 with same range but apply time difference $\begin{cases} \text{HW} = -0.6 \text{ hr.} \\ \text{LW} = -1.0 \text{ hr.} \end{cases}$

Condition of records satisfactory except as noted below:

E. C. McKay
Section

Chief, Division of Tides and Currents.

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

17 March 1950

Division of Charts: R. H. Carstens

Plane of reference approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 7672a

Locality Kvichak Bay, Bristol Bay, Alaska

Chief of Party: R. W. Knox in 1949

Plane of reference is mean lower low water, reading

~~36.3 ft. on tide staff at~~

~~25.0 ft. below datum~~

35.5 ft. on fathometer at Station No. 6 (Whale boat of Middle Bluff)

25.0 ft. on fathometer at Station No. 10 (Off Egegik Buoy)

NOTE: For all soundings referred to Station No. 6:

C Zone use actual tides

B zone use same range, but apply time difference (HW = -0.3 hr.
(LW = -0.6 hr.)

A Zone use same range, but apply time difference (HW = -0.6 hr.
(LW = -1.0 hr.)

~~Condition of records satisfactory as noted below~~

For all soundings referred to Station No. 10:

A Zone use actual tides

E. C. McKay
Section

Chief, Division of Tides and Currents

GEOGRAPHIC NAMES

Survey No. H-7672

Name on Survey	Source											
	A	B	C	D	E	F	G	H	K			
<u>Alaska</u>												1
<u>Bristol Bay</u>											USGB	2
<u>Chichak Bay</u>												3
												4
<u>Goose Point</u>												5
<u>Egegik River Entrance</u>											USGB	6
<u>Red Bluff Light</u>												7
<u>Cape Chichagof</u>												8
<u>Middle Bluff Light</u>												9
<u>Big Creek</u>												10
												11
												12
												13
<u>Clarks Point, Nushagak Bay</u>											(tide staff location)	14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27

Names underlined in red are approved. 4/29/49 L.Heck

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. **H.672.**

Records accompanying survey:

Boat sheets; sounding vols. ¹⁰.....; wire drag vols.;
 bomb vols.; graphic recorder rolls ^{11 envel.}.....;
 special reports, etc.

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

Number of positions on sheet		164
Number of positions checked		53
Number of positions revised		0
Number of soundings revised (refers to depth only)		17
Number of soundings erroneously spaced		4
Number of signals erroneously plotted or transferred		0
Topographic details	Time	4
Junctions	Time	1
Verification of soundings from graphic record	Time	20

Verification by *Stephen Rose*..... Total time **200**.. Date **10-21-49**
 (Note: Two other verifiers' reports)

Reviewed by *J.A. Dinsmore*..... Time **18** hrs. Date **10 Nov. 1950**
 (includes 1948 & 49 work)

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ^{H-7672}.....

Records accompanying survey:

Boat sheets ...¹.; sounding vols. ³~~13~~....; wire drag vols.; bomb vols.; graphic recorder rolls ¹³~~14~~envel. special reports, etc.

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

Number of positions on sheet	..581..
Number of positions checked	..41..
Number of positions revised	..2..
Number of soundings revised (refers to depth only)	..230.. <i>Tides, inlets etc</i>
Number of soundings erroneously spaced	..24..
Number of signals erroneously plotted or transferred
Topographic details	Time ..5... hrs
Junctions	Time ..8... hrs
Verification of soundings from graphic record	Time ..8... hrs
<i>Tide curves and adjustments</i> 24 hrs
Verification by... <i>A.P. Stini</i>	Total time 90... Date 7/15...
Reviewed by... <i>J.A. Dinamore</i>	Time Date <i>see 1st sheet</i>

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ^{H-7667}~~H-7672~~ 1949

Records accompanying survey:

Boat sheets 2.^{H-7667}~~H-7672~~; sounding vols. ..4...; wire drag vols. ..0...; bomb vols. ..0...; graphic recorder rolls ⁴env...; special reports, etc. 0.....

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

Number of positions on sheet .426...
Number of positions checked ...31...
Number of positions revised ...4...
Number of soundings revised (refers to depth only) ...0...
Number of soundings erroneously spaced ...0...
Number of signals erroneously plotted or transferred ...0...
Topographic details Time ...0...
Junctions Time ...1hr...
Verification of soundings from graphic record Time ...8hrs...

Verification by R. K. De lauder Total time 49 plotting 52 verification Date 10-18-50

Reviewed by J. A. Wisnomore Time Date See 1st sheet

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7672

FIELD NO. PF-2648

Alaska, Bristol Bay - Kvichak Bay, Off Cape Chichagof
Surveyed in August - September 1948 & June 1949 Scale 1:20,000
Project No. CS-327

Soundings:

Control:

808 Fathometer

Sextant fixes on shore signals

Chief of Party - R. F. A. Studds and R. W. Knox

Surveyed by - R. W. Knox, R. C. Bolstad, E. C. Baum, J. C.
Mathisson, A. L. Wardwell, J. O. Phillips,
G. D. Scott, E. H. Sheridan, N. E. Taylor,
R. C. Darling, J. Plaggmier

Protracted by - C. E. Pederson, R. E. Latta, R. K. DeLawder

Soundings plotted by - C. E. Pederson, R. E. Latta, R. K. DeLawder

Verified and inked by - S. Rose, R. K. DeLawder, A. R. Stirni

Reviewed by - T. A. Dinsmore, 10 November 1950

Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline originates with air-photographic surveys T-9076 and T-9078 (1949).

The signals are from the above surveys and from graphic control survey T-7085 (1948). The fixes for the supplementary hydrographic signals are recorded in the sounding volumes of the present survey.

2. Sounding Line Crossings

Considering the unevenness of the bottom, depths at crossings are in good agreement. Several short sections of sounding lines have been rejected because of excessive differences at crossings. Minor differences still exist but are to be expected on the sides of bars and where steep slopes occur.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated. The 3-ft. depth curve has been added to aid in defining inshore shoals.

An expansive sand flat which uncovers at M.L.L.W. extends throughout the inshore area of the survey and reaches its maximum width in lat. $58^{\circ}16.4'$ where the low-water line falls more than two miles offshore.

The irregularities appearing throughout the inshore bottom probably result from ice gouging and the action of the strong tidal currents which flow in this region. The offshore bottom is moderately uneven.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-7666(1948) on the north and H-7167(1946) on the southeast. In the latter junction, discrepancies of 1-2 ft. between low-water depths on H-7167 and the present survey are considered unimportant because of the instability of the bottom. The discrepancies probably resulted from natural bottom changes occurring during the 2-3 years intervening between the surveys.

The junction with H-7667(1948) on the west will be considered in the review of that survey. Project surveys on the south are not yet registered in this office.

5. Comparison with Prior Surveys

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

6. Comparison with Chart 9051 (Latest print date 4/3/50)

A. Hydrography

Except for the sunken rock "P.D." charted in lat. $58^{\circ}20.1'$ long. $157^{\circ}39.9'$, charted hydrography originates entirely with the unverified 1948 work of the present survey. Additional split sounding lines were run throughout the survey area during 1949. With this additional work and the subsequent revision of many 1948 soundings, the present survey soundings supersede the charted information.

The sunken rock "P.D." charted in lat. 58°20.1', long. 157°39.9' from chart Letter 335 (1928) should be disregarded. Falling in present depths of 31 ft. the sunken rock is discredited by adequate development on the present survey.

B. Aids to Navigation

Aids on the present survey are in substantial agreement with charted aids and adequately mark the features intended.

Navigation in the shoal areas should be done during a rising tide.

7. Condition of Survey

- a. The sounding records are complete; the Descriptive Report covers all matters of importance.
- b. Most of the soundings of the 1948 work were revised in the Washington Office as a result of the application of tide reducers derived from new tide curves which were drawn for this area. The tide reducers applied in the field resulted in discrepancies of as much as 4 ft. in sounding line crossings. The application of revised tide reducers has eliminated these discrepancies and greatly improved the delineation of the depth curves.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

With the additional work of 1949, the survey is now considered to be complete and basic. No further work is necessary.



H. R. Edmonston
Chief, Nautical Chart Branch

Examined and approved:



R. W. Knox
Chief, Division of Charts



L. S. Hubbard
Chief, Section of Hydrography



W. M. Scaife
Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. H-7672

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1/30/50	9051	S.A. McLaughlin	Before <input checked="" type="checkbox"/> After Verification and Review (1948 work only) 2/25/50
6/30/52	9000	J.H. Eaton by HFS	Before <input checked="" type="checkbox"/> After Verification and Review + P.D. rock deleted as recommended in Review.
12-15-54	9051	J.H. Eaton	Comp. App. d. Before <input checked="" type="checkbox"/> After Verification and Review + P.D. rock deleted as recommended in Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			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.