

7828

Diag. Cht. Nos. 8802-3 & 8502-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. PF-2350 Office No. H-7828

LOCALITY

State ALASKA

General locality BRISTOL BAY

Locality SNAKE RIVER, NUSHAGAK BAY

19 50

CHIEF OF PARTY

R.W. Knox, R.L. Pfau, C. Pierce

LIBRARY & ARCHIVES

DATE Mar. 22, 1951

B-1870-1 (1)

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 7828

Field No. Pf 2350

State Alaska ✓
General locality Bristol Bay - Nushagak Bay ✓
Locality ~~Nushagak Bay~~ Snake River ✓
Scale 1/ 20 000 ✓ Date of survey 26 June to 23 July, 1950. ✓
Instructions dated 20 June 1946, 25 April 1950
Vessel PAINFINDER
Chief of party R. W. Knox, ^{R.L.} Pfau, ^{C.} Pierce ✓
Surveyed by J. C. Bull ✓
Soundings taken by ~~Fathometer~~, graphic recorder, hand lead, wire
Fathograms scaled by H. V. K.
Fathograms checked by O. H. Quade
Protracted by H. C. Parsons
Soundings penciled by H. C. Parsons
Soundings in ~~fathoms~~ feet at ~~MLLW~~ MLLW ✓

REMARKS:

DESCRIPTIVE REPORT

TO
ACCOMPANY

HYDROGRAPHIC SURVEY H-7828 (Field No. PF-2350)

SNAKE RIVER, NUSHAGAK BAY, ALASKA

1950

Scale 1:20,000

Charles Pierce Chief of Party

PATHFINDER

John C. Bull Hydrographer

A. PROJECT: Project CS-327, Instructions dated 20 June 1946 and supplemental Instructions dated 25 April 1950.

B. SURVEY LIMITS AND DATES: From the entrance of the Snake River Latitude 58°-51'.9 northward to Latitude 59°-01'.9 and the Weary River from the junction of the Snake and Weary Rivers northward to Latitude 59°-01'.8. Field work began 28 June and ended 22 July. There are no previous survey of these rivers. This survey makes a junction on the south with sheet PF-2348, H7670, 1948, 1949 and 1950. There are no surveys beyond the northern limit of this survey. Considerable time was spent in supplying water for this party. A half day was spent every fourth day to haul water.

C. VESSELS AND EQUIPMENT: A camp was established on the west bank of the Snake River approximately two miles south of the junction of the Snake and Weary Rivers. Motor launches Nos. 1 and 2 of the PATHFINDER were used. Motor Launch No. 1 was used from 26 June to 8 July. This launch developed engine trouble and was replaced by Launch No. 2. Launch No. 2 was used from 10 to 23 July, the completion date of the survey. These launches were operated at standard speed and have a turning radius of approximately fifteen meters.

A portable automatic depth recorder No. 52 of the 808 type was used to determine the depths. The transmitting and receiving units were installed in the bilge. Surface temperatures and salinities were observed on 5, 12, 14 and 21 July to determine the velocity corrections. Bar checks were taken three times daily if practicable. The bar was set to ten feet and the initial adjusted until the depth read ten feet.

A leadline was used to determine bottom characteristics and spot depth checks.

D. TIDE AND CURRENT STATIONS: Four whaleboat fathometer tide stations 1-S, 2-S, 3-S and 4-S were occupied to determine tide reducers. Each station was occupied for five or more days. Station 1-S was not used in determining reducers because no hydrography was done during the period this station was occupied. See TIDE NOTE for details.

No current stations were occupied during this survey. It is

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY H-7828, Continued

estimated that the average current velocity in these rivers is three to four knots

E. SMOOTH SHEET: The smooth sheet for this work was prepared on the ruling machine and the shore line transferred from Airphoto compilation in Washington. The shore line and topographic detail was inked and verified by the processing office in accordance with paragraph 757 of the Hydrographic Manual.

F. CONTROL STATIONS: No triangulation stations were used in this survey. The basic control for the survey of the Snake River was pricked directly upon air photographic compilation sheet No. T-9057, T-9047 and T-9040 (1947-50) by comparing the physical features on the ground with those shown on the compilation sheets. From these pricked points additional hydrographic signals were located by sextant fixes and cuts. To insure positive identifications a round of cuts was taken at each station occupied to all other stations visible and a net work of graphic control was built up from the plotted cuts. This method proved very satisfactory and the resulting locations were excellent. The signals for the survey of the Weary River were all pricked directly upon the air photographic compilation sheets.

G. SHORELINE AND TOPOGRAPHY: The shoreline and topographic detail was obtained from the air photographic compilation sheets T-9057, T-9047 and T-9040. (1947-50)
(reviewed)

There are no discrepancies between the topographic and hydrographic surveys.

The low-water line is not defined throughout the Snake and Weary Rivers because the importance of this was not considered sufficient to warrant the additional time required to run gradient lines.

H. SOUNDINGS: All soundings were obtained with the 808 fathometer number 52. Standard methods were used to determine fathometer corrections.

I. CONTROL OF HYDROGRAPHY: The hydrography in the Snake River was controlled by sextant fixes, and estimated distances when abeam of signals. In the Weary River a mid channel and a line off each bank was run. All positions were fixed by estimated distances when abeam of signals. No sextant fixes were used on the Weary River Hydro.

J. ADEQUACY OF SURVEY: The survey of the Snake and Weary Rivers is considered adequate and complete.

The junction with sheet PF-2348, H-7670⁽¹⁹⁴⁸⁻⁴⁹⁻⁵⁰⁾ is not satisfactory. This is due to the weak shoran fixes obtained on sheet PF-2348, H-7670 and not covered by the sextant fixes on this sheet. To improve the junction hydrography the shoran work on PF-2348 (H-7670) should be adjusted to obtain a junction with this sheet. See comments made in DESCRIPTIVE REPORT for sheet PF-2348 (H-7670).

Review,
par. 4.

No nonstandard depth curves were used on this sheet.

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY H-7828, Continued

- K. **CROSSLINES:** No crosslines were run on this sheet. ✓
- L. **COMPARISON WITH PRIOR SURVEYS:** There are no previous surveys of these Rivers. ✓
- M. **COMPARISON WITH CHART:** There are no previous charts of these rivers. ✓
- N. **DANGERS AND SHOALS:** There are not important dangers or shoals in these rivers. ✓
- O. **COAST PILOT INFORMATION:** There are no special Coast Pilot notes for these rivers. A general note as follows applies: It is generally safe to navigate these rivers on rising tides following the "ebb-tide bend" rule and mid channel courses.
- There are no good anchorages in these rivers because the bottom is generally gravel covered with a thin layer of mud and the holding qualities are poor. Very strong currents both flood and ebb were experienced. Floating tundra islands to thirty feet in diameter, caused by sluffing away of the banks, float up and down the river after the spring thaw and finally make their way into Nushagak Bay. These are a danger to any small boat anchored in the rivers.
- Only one small lake, on the east bank of and six miles up the Weary River, was found satisfactory for drinking water. There are many small lakes along the banks of the rivers but all that were investigated were filled with a red slime and were unsatisfactory for drinking water.
- The launch was anchored near the camp site, Latitude $58^{\circ}-57'.0$ Longitude $158^{\circ}-46'.7$, on the west side of the channel. This was the best anchorage in the vicinity being on the side of least current, however, it was not unusual for the launch to drag a half mile, either up or down stream. The launch was anchored with a 150 lb. stock anchor with 20 fathoms of $3\frac{1}{2}$ inch line.
- The average currents encountered are estimated to be three to four knots. This is based on the time, three hours, required to run from tide station S-2 to anchorage, a distance of 6.8 miles. The average speed of the launch was 6.0 to 6.5 knots.
- There are no wrecks or obstructions which are dangerous to navigation.
- P. **AIDS TO NAVIGATION:** There are no aids to navigation, bridges, telephone lines, submarine cables or ferry routes in this area. ✓
- Q. **LANDMARKS FOR CHARTS:** There are no landmarks of value in this area. ✓
- R. **GEOGRAPHIC NAMES:** No new geographic names appear on this sheet. ✓
- S. **SILTED AREAS:** No silted areas were detected during this survey. ✓

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY H-7828, Continued


2. TABULATION OF APPLICABLE DATA:

a. Attached to this report:

1. Tabulation of statistics
2. Fathometer corrections
3. List of signals
4. Tidal Note
5. Sheet layout and tide zones
6. *Initial corrections*
7. *Leadline and Bar check line corrections*

b. Reports submitted under separate cover

1. Tide Report 1950
2. Fathometer corrections report 1950 *With H-7770*
3. Landmarks for Chart 1950
4. Coast Pilot Notes 1950


JOHN C. BULL
Lt. Comdr., USC&GS

Approved and forwarded



CHARLES PIERCE
Captain, USC&GS
Commanding Ship PATHFINDER

H 7828
Pf 2350

Nushagak Bay - Snake River.

Processing Office Notes.

Smooth sheet.

The projection was ruled on the machine in Washington. The topography south of Lat. 59° was transferred in the Washington office. The topography north of Lat 59° was transferred in the Seattle Processing office from T 9040 (1447-50) and all topography was inked in the processing office. Signals were plotted on the smooth sheet by the hydrographer.

Edgar E. Smith
Cart. Engr.

Edgar E. Smith
2/28/51

LIST OF SIGNALS

SHEET H-7828 (PF 2350)

1950

<u>NAME</u>	<u>SOURCE</u>	<u>NAME</u>	<u>SOURCE</u>
ABE ✓	Hydrographic	JAP ✓	Photo compilation spot
AC ✓	"	JIM	" " "
ADD	Photo Compilation spot	JOY	Hydrographic
ANT	" " "	JUG ✓	"
AXE	" " "	KED	Photo compilation spot
AZO	" " "	KEY	Hydrographic
BAG	" " "	KID	Photo compilation spot
BAR	Hydrographic	LAD	" " "
BAT	Photo compilation spot	LEG ✓	" " "
BOB	" " "	LET	" " "
BOX	" " "	LOG	" " "
BOY	" " "	LUG	" " "
BUG ✓	" " "	MAN	" " "
BUM	" " "	MET	" " "
CAB	" " "	MID	" " "
CAT	" " "	MOP ✓	" " "
COD	" " "	NAT	" " "
COCK ✓	Hydrographic	NEW	" " "
COW	Photo compilation spot	NIP	" " "
CUT	Air photo location	NOW	" " "
DAY	Photo compilation spot	NUB ✓	Hydrographic
DIP ✓	Hydrographic	NET NUT	Photo compilation spot
DOG ✓	"	ODD	" " "
DON	Photo compilation spot	OLD ✓	Hydrographic
DOT	" " "	OUT ✓	"
EAT	" " "	PAT	Photo compilation spot
EGG	" " "	PET ✓	Hydrographic
END	" " "	POP ✓ ✓ ✓ T.	"
EVA	" " "	POT	Photo compilation spot
FAT ✓	Hydrographic	PUG ✓	Hydrographic
FIT	Photo compilation spot	QUO ✓	"
FLY	" " "	RAG	Photo compilation spot
FOX	" " "	RAT	" " "
FUN	" " "	RED	" " "
GAL	Hydrographic	RIG	" " "
GAS	Photo compilation spot	ROT	" " "
GEM	" " "	SAD ✓	Hydrographic
G.	" " "	SAL	Photo compilation spot
GUS	" " "	SHE	" " "
GUY	Hydrographic	SIS	" " "
HAT	Photo compilation spot	SUB	" " "
HER ✓	Hydrographic	TAP	" " "
HOP	Photo compilation spot	TOM	" " "
HOW ✓	Hydrographic	TOY	" " "
HOT HUT ✓	"	TREE ✓	Hydrographic
ICE	Photo compilation spot	TRY	Photo compilation spot
IDA	Hydrographic	TUB ✓	" " "

<u>NAME</u>	<u>SOURCE</u>
USE	Photo compilation spot
VET	Hydrographic
VIM	Photo compilation spot
WA	" " "
WA.	" " "
WHO	" " "
WIG	Hydrographic
YAM	"
YES	Photo compilation spot
YET	Hydrographic
ZAG	"
ZIG	"
ZOO	Photo compilation spot

ABSTRACT OF VELOCITY CORRECTIONS
PATPFINDER 1950

DATES	May 13-22	May 26-27	June 2-19	June 20	July 10	July 11 on
SHEETS	2348	2348	ALL	ALL	2350	ALL except 2350
VESSELS	Launches	Launches	Launches	Ship	Launches	Launches
Velocity	1444.4	1457.2	1467.9	1467.9	1467.9	1475.9
F	-0.03683	-0.02829	-0.02116	-0.02116	-0.02116	-0.01582
$\frac{1}{F}$	-27.15	-35.35	-47.26	-47.26	-47.26	-63.21
REDUCERS						
FEEET						
			TO DEPTHS			
			FEEET	FEEET		
0	16½	18½	21½	25½	21½	25½
-½	30	36½	45	49	45	57
-1	43½	54	69	73	69	89
-1½	57	71	92	96	92	120
-2	71	89	116	120	116	
-2½	84	107				
-3	98					
						29½
						61
						93
						124
						156
						72
						114
						30½

ABSTRACT OF INITIAL CORRECTIONS

1950

Initial corrections were applied when the fathograms were scanned.

ABSTRACT OF LEADLINE

CORRECTIONS

VESSEL	LEADLINE READING Feet	TRUE LENGTH Feet	CORRECTION Feet	DATE
PATHFINDER	-	-	0	Throughout season
RAVEN	-	-	0	Throughout season
Launch #1	10.0	10.0	0.0	23 Aug. 1950
Leadline #1	19.9	20.0	+ 0.1	
	29.9	30.0	+ 0.1	
	39.9	40.0	+ 0.1	
	49.8	50.0	+ 0.2	
	59.8	60.0	+ 0.2	
	69.7	70.0	+ 0.3	
	79.7	80.0	+ 0.3	
Launch #2	10.0	10.0	0.0	22 May 1950
Leadline #2	20.0	20.0	0.0	
	30.0	30.0	0.0	
	40.0	40.0	0.0	
	50.0	50.0	0.0	
	60.0	60.0	0.0	
	5.0	5.0	0.0	9 June 1950
	10.0	10.0	0.0	
	15.0	15.0	0.0	
	20.0	20.0	0.0	
	25.0	25.0	0.0	
	30.0	30.0	0.0	
	35.0	35.0	0.0	
	37.9	38.0	+ 0.1	
	39.9	40.0	+ 0.1	
	44.9	45.0	+ 0.1	
	49.8	50.0	+ 0.2	
	54.8	55.0	+ 0.2	
	59.8	60.0	+ 0.2	
	64.8	65.0	+ 0.2	
	69.8	70.0	+ 0.2	
	74.8	75.0	+ 0.2	
	79.8	80.0	+ 0.2	
	10.0	10.0	0.0	15 Aug. 1950
	20.0	20.0	0.0	
	30.2	30.0	- 0.2	
	40.2	40.0	- 0.2	
	50.3	50.0	- 0.3	
	60.3	60.0	- 0.3	
	70.3	70.0	- 0.3	
	80.5	80.0	- 0.5	

ABSTRACT OF LEADLINE CORRECTIONS, Continued

2 of 2

VESSEL	LEADLINE READING Feet	TRUE LENGTH Feet	CORRECTIONS Feet	DATE
Launch #3	10.0	10.0	0.0	9 June 1950
	20.0	20.0	0.0	
	30.0	30.0	0.0	
	40.0	40.0	0.0	
	50.0	50.0	0.0	
	60.0	60.0	0.0	
	10.0	10.0	0.0		23 Aug. 1950
20.0	19.9	- 0.1		
30.0	29.9	- 0.1		
40.0	40.0	0.0		
50.0	50.0	0.0		
60.0	60.0	0.0		
70.0	70.0	0.0		
80.0	80.0	0.0		
Launch #4	10.0	10.0	0.0	25 May 1950
Leadline #4	20.0	20.0	0.0	15 Aug. 1950
	30.0	30.0	0.0	
	40.0	40.0	0.0	
	50.0	50.0	0.0	
	60.0	60.0	0.0	
	70.0	70.0	0.0	
	80.0	80.0	0.0	
	90.0	90.0	0.0	
	100.0	100.0	0.0	

ABSTRACT OF BAR CHECK LINE

CORRECTIONS

VESSEL	BAR CHECK LINE READING Feet	TRUE LENGTH Feet	CORRECTION Feet	DATE
PATHFINDER	-	.	.	.
RAVEN			0	throughout season
Launch #1	10.0	10.0	0.0	23 Aug. 1950
Bar check #1	20.0	20.0	0.0	
Launch #2	10.0	10.0	0.0	22 May 1950
Bar check #2	20.0	20.0	0.0	
	5.0	5.0	0.0	9 June 1950
	10.0	10.0	0.0	
	15.0	15.0	0.0	
	20.0	20.0	0.0	
	25.0	25.0	0.0	
	30.0	30.0	0.0	
	35.0	35.0	0.0	
	40.0	40.0	0.0	
	45.0	45.0	0.0	
	50.0	50.0	0.0	
	10.0	10.0	0.0	15 Aug. 1950
	20.0	20.0	0.0	
	30.0	30.0	0.0	
	40.0	40.0	0.0	
	50.0	50.0	0.0	
Launch #3	10.0	10.0	0.0	9 June 1950
Bar check #3				
	10.0	10.0	0.0	23 Aug. 1950
Launch #4	10.0	10.0	0.0	15 Aug. 1950
Bar check #4	20.0	20.0	0.0	
	30.0	30.0	0.0	
	40.0	40.0	0.0	
	50.0	50.0	0.0	

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STATISTICS FOR HYDROGRAPHIC SURVEY

H-~~4670~~ (PF-2350)

<u>Vol. No.</u>	<u>Day Letter</u>	<u>Date</u>	<u>HL-Wire</u>	<u>Positions</u>	<u>Statute Miles</u>
r	a	7/11/50		59	16.5
+	b	7/12/50		86	18.7
I	c	7/13/50		90	24.2
II	d	7/14/50		90	21.9
II	e	7/15/50		54	11.5
II	f	7/18/50		41	6.0
II & III	g	7/19/50		156	33.1
III	h	7/21/50		<u>4</u>	<u>-</u>
			TOTALS	580	131.9

Square statute miles - 5.4

7828

TIDAL NOTE

1950

The tide reducers for this hydrography were obtained from whale-boat fathometer tide stations 2-S Latitude 59°-00'.5 Longitude 158°-44'.8, 3-S Latitude 58°-57'.7 Longitude 158°-47'.7 and 4-S Latitude 58°-54'.2 Longitude 158°-45'.1. Tide Station 2-S was in operation when the hydrography was done in the upper Snake River, Zones 19 to 25. Three-S was in operation when the hydrography was done in the central section of the Snake River and the Weary River, Zones 17 - 19 and 26 - 32. Since no tide stations were occupied in the Weary River, Tide Zones 26 to 32 were established based on the same spacing as the upper section of the Snake River, zones 19 to 25. Four-S was in operation when the hydrography was done in the lower section of the Snake River, Zones 15 to 17 and upper section of the Snake River Zones 17 to 25. Simultaneous comparisons were made with the Protection Point gage from which time and range differentials were determined. Tide zones were established from these results so that tide reducers would be obtained for any section of the river. No tide staffs were installed.

Corrections for differences in time and range as compared with the Protection Point Gage are as follows:

STATION	ZONE	RANGE RATIO	TIME DIFFERENCES		
			HW	HLW	LLW
	15	1.3	+ 0.4	+ 0.8	+ 0.8
Fath. Sta. 4-S →	16	1.3	+ 0.4	+ 1.0	+ 1.0
	17	1.3	+ 0.6	+ 0.8	+ 1.2
Fath. Sta. 3-S →	18	1.3	+ 0.8	+ 0.6	+ 1.4
	19	1.3	+ 0.8	+ 0.8	+ 1.6
	20	1.3	+ 0.8	+ 1.0	+ 1.8
	21	1.3	+ 1.0	+ 1.2	+ 2.0
	22	1.3	+ 1.0	+ 1.4	+ 2.2
	23	1.3	+ 1.2	+ 1.6	+ 2.4
Fath. Sta. 2-S →	24	1.3	+ 1.2	+ 1.8	+ 2.6
	25	1.3	+ 1.2	+ 2.0	+ 2.8

NOTE: Weary	26	1.3	+ 0.8	+ 1.0	+ 1.8
River controlled	27	1.3	+ 1.0	+ 1.2	+ 2.0
b y Fath. Sta. 3-S.	28	1.3	+ 1.0	+ 1.4	+ 2.2
Zones are based	29	1.3	+ 1.0	+ 1.6	+ 2.4
upon differences	30	1.3	+ 1.2	+ 1.8	+ 2.6
between fath.	31	1.3	+ 1.2	+ 2.0	+ 2.8
sta. 3-S and	32	1.3	+ 1.2	+ 2.2	+ 3.0
2-S					

Corrections for differences in time between fathometer stations 2-S, 3-S and 4-S obtained from simultaneous comparisons with the Protection Point Gage are as follows:

	TIME OF <u>HW</u>	TIME OF <u>HLW</u>	TIME OF <u>LLW</u>	RANGE <u>RATIO</u>
4-S to 3-S	+ 0.4	- 0.4	+ 0.4	1.0
3-S to 2-S	+ 0.4	+ 1.2	+ 1.2	1.0
4-S to 2-S	+ 0.8	+ 0.8	+ 1.6	1.0

ZONE CORRECTIONS

<u>REF. STA.</u>	<u>ZONE</u>	<u>TIME CORRECTIONS</u>		
		<u>HW</u>	<u>HLW</u>	<u>LLW</u>
↑ Fath. Sta. 4-S ↓	15	0.0	- 0.2	- 0.2
	16	0.0	0.0	0.0
	17	+ 0.2	- 0.2	+ 0.2
	18	+ 0.4	- 0.4	+ 0.4
	19	+ 0.4	- 0.2	+ 0.6
	20	+ 0.4	0.0	+ 0.8
	21	+ 0.6	+ 0.2	+ 1.0
	22	+ 0.6	+ 0.4	+ 1.2
	23	+ 0.8	+ 0.6	+ 1.4
	24	+ 0.8	+ 0.8	+ 1.6
	25	+ 0.8	+ 1.0	+ 1.8

↑ Fath. Sta. 3-S ↓	17	- 0.2	+ 0.2	- 0.2
	18	0.0	0.0	0.0
	19	0.0	+ 0.2	+ 0.2
	26	0.0	+ 0.4	+ 0.4
	27	+ 0.2	+ 0.6	+ 0.6
	28	+ 0.2	+ 0.8	+ 0.8
	29	+ 0.2	+ 1.0	+ 1.0
	30	+ 0.4	+ 1.2	+ 1.2
	31	+ 0.4	+ 1.4	+ 1.4
	32	+ 0.4	+ 1.6	+ 1.6

↑ Fath. Sta. 2-S ↓	19	- 0.4	- 1.0	- 1.0
	20	- 0.4	- 0.8	- 0.8
	21	- 0.2	- 0.6	- 0.6
	22	- 0.2	- 0.4	- 0.4
	23	0.0	- 0.2	- 0.2
	24	0.0	0.0	0.0
	25	0.0	+ 0.2	+ 0.2

There is no correction for range between tide stations 2-S, 3-S and 4-S.

H 7828
Pf 2350

Nushagak Bay

Snake River

List of Geographic names penciled
on smooth sheet.

Nushagak Bay

Snake River

Weary River

APPROVAL SHEET

The work on this sheet was accomplished by Officers of the PATHFINDER. The boat sheet was examined by me upon the completion of the survey and is considered complete. No additional field work is recommended.

A handwritten signature in cursive script, reading "Charles Pierce".

CHARLES PIERCE
Captain, USC&GS
Commanding Officer
Ship PATHFINDER

GEOGRAPHIC NAMES

Survey No. H-7828

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
Alaska				(for title)							1
Bristol Bay				(" ")					USOB		2
											3
											4
<u>Nushagak Bay</u>											5
<u>Snake River</u>											6
<u>Weary River</u>									USGC		7
											8
											9
											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Names underlined
in red are approved.
4-18-51 H. H. H. H. H.

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7828..

Records accompanying survey:

Boat sheets ...².; sounding vols. ...³....; wire drag vols.; bomb vols.; graphic recorder rolls ...⁴eny.; special reports, etc. ...¹ Smooth Sheet; Descriptive Report;.....

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

	TOTAL	Prelim Ver.	Final Ver.	Curves Wash off.
Number of positions on sheet	580	580		
Number of positions checked	209	....4.	+ 201	+ 4
Number of positions revised	5	....0.	+ 3	+ 2
Number of soundings revised (refers to depth only)	31	....0.	+ 31	—
Number of soundings erroneously spaced	27	....0.	+ 23	+ 4
Number of signals erroneously plotted or transferred	0	....0.	—	
Topographic details	2 hrs	....0.	—	2 hrs
Junctions	6 hrs	....0.	—	6 hrs
Verification of soundings from graphic record	16 1/4 hrs	Time	1/4 hr.	+ 16 hrs

Preliminary
 Verification by *Stephen Rose* Total time *2 hrs.* Date *Sept. 11 '51*
Final Verification by *A. Kaupa* *125.5 hrs* *April 2, 1953*

Reviewed by *J. A. Dinsmore* Time *6 hrs.* Date *29 Dec. 1951*
Review Addendum *3 "* *14 May 1953*
Curves & Sct. E. Thomas Time *27 hrs* *MAY 1953*
Prel. Insp. Stinni Time *4 hrs*
Final " " *6 hrs*

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7828

FIELD NO. PF-2350

Alaska, Bristol Bay, Nushagak Bay - Snake River

Project No. CS-327

Surveyed in June - July 1950

Scale 1:20,000

Soundings:

Control:

808 Fathometer

Sextant fixes on shore signals

Chief of Party - R. W. Knox, R. L. Pfau and C. Pierce

Surveyed by - J. Bull

Protracted by - H. C. Parsons

Soundings plotted by - H. C. Parsons

Preliminary verification by - S. Rose

Verified and inked by - A. Kaupa 2 April 1953

Reviewed by - T. A. Dinsmore, 29 December 1951

Inspected by - R. H. Carstens

1. Shoreline and Signals

The origin of the shoreline and signals is given in the Descriptive Report.

2. Sounding Line Crossings

No crosslines were run on this survey. However, depths on adjacent sounding lines appear to be in harmony.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated. It was impracticable to determine the low-water curve throughout the entire river. Only portions of the low-water curve were developed. However, these portions supplemented by mud flat areas shown on the photogrammetric sheets adequately define the limits of offlying mud flats.

Except for the prominent mud spits which occur at most of the bends in the river, no unusual bottom features are apparent. The bottom for the most part is uneven.

4. Junctions with Contemporary Surveys

(see Review Addendum)

The junction with H-7670 (1948-49-50) on the south will be considered in the review of that survey. The present survey terminates at the project limits on the north.

5. Comparison with Prior Surveys

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

6. Comparison with Chart 9052 (C.P. Drawing No. 3, 21 June 1951)

A. Hydrography

Charted hydrography originates with the present survey prior to verification and review. No revisions were made during the preliminary verification of the present survey.

(see Review Addendum)

B. Aids to Navigation

There are no aids to navigation within the limits of the present survey. The river should be navigated during a rising tide following the "ebb-tide bend" rule and mid-channel courses.

7. Condition of Survey

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

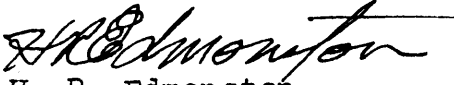
b. From the preliminary inspection, the smooth plotting appears to be well done. *(see Review Addendum)*


8. Compliance with Project Instructions


The survey adequately complies with the Project Instructions.


9. Additional Field Work

For present charting purposes, the survey is considered to be adequate and no additional field work is recommended.


H. R. Edmonston
Chief, Nautical Chart Branch

Examined and approved:

H. Arnold Karo
Chief, Division of Charts


L. S. Hubbard
Chief, Section of Hydrography


W. M. Scaife
Chief, Division of Coastal Surveys

REVIEW ADDENDUM
(after complete verification and inking)
H-7828 (1950)

Adjoining Survey

The present survey junctions adequately with H-7670 (1948-50) on the south.

Comparison with Chart 9052 (Latest print date 3/17/52)

Charted hydrography originates with the present survey prior to verification and review. A few soundings of importance to charting were revised in position or depth during verification of the survey. Several soundings now charted as channel depths actually fall on the banks of the channel. The present survey supersedes the charted information.

Condition of Survey

Completion of the verification and inking of the survey indicates the smooth plotting was well done. The survey is considered to be complete and adequate.

T. A. Dinsmore
14 May 1953

Inspected by: R. H. Carstens

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography.~~

9 May 1951

Division of Charts: R. H. Carstens

Plane of reference approved in 3
volumes of sounding records for

HYDROGRAPHIC SHEET 7828

Locality Snake River, Nushagak Bay, Alaska

Chief of Party: Charles Pierce in 1950

Plane of reference is mean lower low water, reading

6.0 ft. on tide staff at Protection Point

20.6 ft. below B. M. 5 (1950)

Height of mean high water above plane of reference is 15.1 feet.

NOTE: Tide reducers were verified by using zone corrections as
shown on sketch for Tidal Data 1950.

Condition of records satisfactory except as noted below:

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

NAUTICAL CHARTS BRANCH

SURVEY NO. H-7828

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
6/13/51	9052	<i>W. Swann</i>	Before After Verification and Review
8/14/60	9052	<i>C. Palmer</i>	<i>Law</i> Before After Verification and Review <i>for critical changes</i>
2-24-61	8802	<i>F. M. Albert</i>	Before After Verification and Review <i>no change</i>
10-2-91	16322	<i>W. O. Ohno</i>	Before After Verification and Review <i>Consider adequately applied</i>
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			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.