7927

Diag. Cht. No. 8802-3

CS-344

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. SU-4151 Office No. H-7927

LOCALITY

State ALASKA

General locality ALASKA PENINSULA

Locality CHIACHI ISLAND TO KUPREANOF POINT

194 51

CHIEF OF PARTY

G. E. Boothe

LIBRARY & ARCHIVES

DATE JULY 17, 1952

B-1870-1 (1)

7927

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.

REGISTER No. H - 7927

Field No. SU - 4151

State ALASKA

General locality ~~SOUTHWEST ALASKA~~ ALASKA PENINSULA

Locality ~~ALASKA PENINSULA, SOUTH SIDE~~ CHIACHI ISLAND TO KUPREANOF POINT

Scale 1:40,000 Date of survey July - September 1951

Instructions dated 8 March 1951

Vessel Ship SURVEYOR

Chief of party Comdr. Glendon E. Boothe

Surveyed by Ship's Officers

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

Fathograms scaled by R. F. LANIER, C. W. MOONEY

Fathograms checked by C. W. MOONEY, R. F. LANIER

Protracted by Seattle Processing office Clarence E. Pedersen

Soundings penciled by Seattle Processing office Clarence E. Pedersen

Soundings in fathoms ~~feet~~ at ~~MLLW~~ MLLW based on a velocity of sound of 800 fathoms per second

REMARKS:

U. S. GOVERNMENT PRINTING OFFICE 777032

DESCRIPTIVE REPORT

to accompany

Hydrographic Survey H-7927 (Field No. SU-4151)

PROJECT:

This survey was intiated under CS-344 covered by Director's Instructions to the Commanding Officer, Ship SURVEYOR dated 8 March 1951.

SURVEY LIMITS & DATES:

H-7927 (1951) and H-7928 (1951) should be considered together. In order to avoid excessive smooth sheet size and in accordance with Director's letter dated 18 November 1951, it was necessary to plot five hundred forty two positions on H-7928. The record books and tables of statistics show how this division was made.

The survey is on the south side of the Alaska Penninsula, from five miles west of Mitrofania Island to Kupreanof Point, and from a junction with inshore surveys to the offshore limit of the project. Field work started on 18 July and was ended on 20 September. Portions of H-6880 (1945) and H-3796 (1915) are ~~included in~~ covered by the present survey.

VESSEL & EQUIPMENT:

All sounding was done by the Ship SURVEYOR. The vessel was operated at full speed (9 - 10 knots) with a turning radius of approximately 400 meters. Submarine Signal Co. Model 808J depth recorder No. 128S was used for all sounding. Tachometer reeds calibrated for a velocity of 800 meters/sec. were installed for the entire season. Shoran set: Ind. No. 489: CRV; Trans. No. 724: CRV was used for the position location.

TIDES & CURRENT STATIONS:

Portable tide gages were maintained at Chiachi Island in latitude 55° - 50!6, longtitude 159° - 06'.3 and at Kupreanof Harbor in lat- 55 - 47'.4, longitude 159 - 21'.0. Corrections were from one or the other of these stations and applied without time or range corrections according to Director's letter 36-kh dated 15 October 1951.

One current station was occupied in the harbor on the east side of Chiachi Island with negative results.

SMOOTH SHEET:

The smooth sheet was constructed by hand by the Seattle Processing Office. Shoreline was transferred from film positives of T-8827 (1941-45) and T-8828, (1941-46) T-8830, T-8832, T-8833 (1941-45) by means of the Saltzman projector. Control stations (1942-47) (1941-45)

and topographic details were plotted and inked by the Processing Office.

CONTROL STATIONS:

The adjusted triangulation is found in Folio V, pp. 38-39; 98-112; 120-131; 345; 352; 355. Additional locations are from the 1951 triangulation by Glendon E. Boothe. *Topographic signals are from T-8828 and T-8830 of 1941-45. The hydrographic signal is from H-7924 (1951).*

A portable dog ear has been constructed for three signals on the southwest shore of Chiachi Island.
Discarded dog ear after final verification.

SHORELINE & TOPOGRAPHY:

Shoreline and topographic details are from film positives of T-8827, T-8828, T-8830, T-8832, T-8833.
(1942-47) (1941-45) (1941-45) (1941-46) (1941-45)

SOUNDINGS:

All soundings were obtained with Depth Recorder No. 128S. Standard methods of operation and scanning were used and the usual corrections except velocity were applied to the soundings. See fathometer report transmitted 29 February 1951. *filed with H-7923*

CONTROL OF HYDROGRAPHY:

The entire area was controlled by two shoran stations; one located at WEDGE, 1913 and the other at GULL 1951. A considerable portion of the inshore area was controlled by one arc and a sextant angle on shore objects in the places where the shoran arc intersections were too weak to get the desired strength of fix.

ADEQUACY OF SURVEY:

The survey is complete and adequate to supersede *(1951)* prior surveys for charting. The junctions with contemporary surveys H-7923 and H-7924 *(1951)* are satisfactory and no holidays or excessive differences exist. The junction with contemporary survey H-7928 is perfect since the break comes in the middle of the sounding lines. *(1951)*

Depth curves can be drawn at the junctions.

COAST PILOT INFORMATION:

Information under this heading is being compiled and will be transmitted separately.

AIDS TO NAVIGATION:

There are no fixed or floating aids to navigation within the area of this survey.

LANDMARKS FOR CHARTS:

A report of the Landmarks for charts for the entire area covered during the 1951 Field Season has been submitted on form 567 on 28 March 1951. Landmarks covered by the area of this survey are taken up with the inshore surveys.

GEOGRAPHIC NAMES:

No names ~~a~~other than those appearing on the topographic manuscripts are recommended. No investigation of, or report on the geographic names of the region ~~has been~~ WBS made.

APPLICABLE DATA:

Fathometer Report *(filed with H-7923)*	29 February
Landmarks for Charts	23 March
Coast Pilot Notes	to be submitted

The following sections will be written by the Seattle Processing Office when the survey is smooth plotted:

CROSSLINES

COMPARISON WITH PRIOR SURVEYS

COMPARISON WITH CHART *see Review*

DANGERS AND SHOALS

Respectfully Submitted

Raymond H. Tryon Jr.

Raymond H. Tryon Jr.
LCDR. USC&GS

H 7927
Su 4151

South side of the Alaska Peninsula.

Processing Office Notes.

Smooth sheet.

The projection was made by hand. For control of the Shoran arcs points were computed along lines radial from Shoran Stations Wedge and Gull. The distances between plotted control points were subdivided carefully and the arcs swung thru the resulting points. Shoreline was transferred from T 8827 (1942-47), T 8828 (1941-45), T 8829 (1941-46) & T 8830 (1941-45), 32

Shoreline from T-8833 (1941-45) was added at time of verification.

Dog ear.

A dog ear has been detached from its position and fastened to the sheet to prevent damage or loss. It will be a simple matter to restore it to its proper place. The dog ear was discarded after verification.

Crossings.

Crossings are generally good. Differences of one to two fathoms occur. These differences were eliminated during preliminary verification.

Comparison with H 3796.

A tracing of H 3796 (Circa 1914) was supplied by the field party, on the same scale and datum as the present survey. It accompanies the smooth sheet. Differences have been noted in blue on the tracing. On the older survey the soundings are open and sparse in comparison with the recent work. On H 7927 the bottom is sufficiently even that a fair inference of depths between sounding lines can be concluded. There is a general agreement of depths between the old and the new surveys but with many variations of one, two and three fathoms. In the southwest part of the common area the older depths are usually greater. The depths of the older survey are more erratic than the current undulations of the bottom.

Tracing discarded. Scale 1:100,000

Also see Review for comparison with prior surveys.

I would guess that the older survey used pressure tubes. (Bossenell Pressure Tubes)

The differences are unimportant for surface navigation except when checking depths. There are no dangers in the sounded area of H 7927.

Edgar E. Smith
Cart. Engr. 6/30/52

H 7927
Su 4151

South side Alaska Peninsula.

List of geographic names
penciled on smooth sheet.

Mitrofania Island

Chiachi Island

Paul Island

Jacob Island

Kupreanof Point.

Statistics

for

HYDROGRAPHIC SURVEY H - 7927

(Field No. SU - 4151)

1951

Date	Day	Positions	Statute Miles
18 July	4 - 122 A	119	94.5
19 July	B	69	56.0
20 July	C	75	61.9
23 July	1 - 16 D	16	13.9
24 July	4 - 34 E 44 - 161 E	149	119.4
26 July	F	129	98.6
27 July	G	156	111.9
31 July	1 - 51 H 70 - 79 H	61	39.6
10 Aug.	J	70	59.1
11 Aug.	1 - 7 K 24 - 42 K 55 - 86 K	58	37.4
13 Aug.	1 -29 L 86 - 90 L	34	39.0
14 Aug.	5 - 143 M	109	83.2
15 Aug.	1 - 47 N	47	33.3
16 Aug.	117 - 145 P	29	52.8
17 Aug.	Q	84	70.7
18 Aug.	R	90	70.4
19 Aug.	S	84	65.5
22 Aug.	T	83	67.8
23 Aug.	U	106	88.7
24 Aug.	V	112	86.1
28 Aug.	1 - 84 W	84	67.4
10 Sept.	104 - 117 X	14	7.8
11 Sept.	1 - 49 Y 88 - 143 Y	103	59.4
12 Sept.	Z	5	---
13 Sept.	AA	2	---
15 Sept.	AB	3	---
20 Sept.	AC	11	---
	Totals	1902	1484.4

TIDE NOTE

7927

Tide gages were maintained at Chiachi Island and at Kupreanof Harbor. The marigrams were forwarded to Washington and the following heights of MLLW were furnished for the respective staffs:

CHIACHI Gage	4.5 feet	ϕ 55-50.6 λ 159 06.3
KUPREANOF Harbor	2.5 feet	ϕ 55 47.4 λ 159 21.0

Reductions to soundings were made without time or height corrections.

GEOGRAPHIC NAMES

Survey No. H-7927

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	
Alaska										1
Alaska Peninsula									BGN	2
Mitrofania Island			✓						"	3
Chiachi Island			✓							4
Paul Island			✓							5
Jacob Island			✓							6
Kupreanof Point			✓						BGN	7
Spitz Island										8
Noon Point										9
Fox Cape				Names underlined in red						10
Leader Island				are approved. 7-28-52						11
Kupreanof Peninsula				H. Heck						12
										13
										14
Kupreanof Harbor		(location of one tide gage)							BGN	15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27
										M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7927

Records accompanying survey:

Boat sheets ...1...; sounding vols. ...18...; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls ...6 Env.

special reports, etc. 1 Smooth Sheet; 1 Cahier-Sharan Plotting Abstracts

.....

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

		Preliminary Verification	Final Verification
Number of positions on sheet		1902	
Number of positions checked		10	40
Number of positions revised		—	—
Number of soundings revised (refers to depth only)		150	10
Number of soundings erroneously spaced		—	25
Number of signals erroneously plotted or transferred		—	—
Topographic details	Time	—	2 hr
Junctions	Time	7 hr	20 hr
Verification of soundings from graphic record	Time	20 hr	10 hr

Preliminary Verification by R.E. Elkins 96 hr. 11-14-52

" " "

Verification by C.L. Tysor (in Norfolk) 185 hr. Total time 325 hr. Date 10-27-53

" " R.E. Elkins 34 hr 1-25-54

Reviewed by R.E. Elkins Time 40 hr. Date 11-24-52

Review addendum by R.E. Elkins 4 hr 1-25-54

M-2232-1

Preliminary Verification

H-7927

Instructions

1. Verify a pattern of sounding lines throughout the survey.

2. Verify all significant peak soundings in the shoaler depths where the bottom is irregular.

3. Verify the following:

Lat. 55° Long. 159°

41.6'	15.0'	Sdgs. 33-36 G
28.6'	30.4'	69-day sdgs 2 fms too deep
25.6'	27.0	Sdgs. 120-121 A

J. F. Jordan
8/22/52

Preliminary verification by R. E. Elkins Nov 1952

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7927 FIELD NO. SU-4151

Alaska, Alaska Peninsula, Chiachi Island to Kupreanof Point
Project No. CS-344

Surveyed - July to September 1951 Scale 1:40,000

Soundings:

808 Fathometer

Control:

Shoran
Sextant fixes on shore signals

Chief of Party - G. E. Boothe
Surveyed by - G. E. Boothe, J. C. Mathisson, R. H. Tryon, Jr., W. R. Kachel, R. F. Lanier, J. C. Bull & E. F. Hicks, Jr.
Protracted by - C. E. Pederson
Soundings plotted by - C. E. Pederson
Preliminary verification by - R. E. Elkins
Verified and inked by -
Reviewed by - R. E. Elkins, 24 November 1952
Inspected by - R. H. Carstens

1. Shoreline and Control

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

2. Sounding Line Crossings

Depths at crossings are in very good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated.

The bottom is fairly smooth except for knolls and depressions in the northwest section of the survey.

4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-7928 (1951) on the northeast; and with H-7923 (1951) and H-7924 (1951) on the north. Project surveys on the west and southwest have not yet been received in the Washington Office. Soundings

see review addendum

charted to the southeast are in adequate agreement with present depths at the limit of this survey.

Junctional soundings will be transferred when the routine verification is completed.

5. Comparison with Prior Surveys

H-3722 (1914) 1:100,000 (Reconn.)
H-3796 (1915) 1:100,000
H-6880 (1943) 1:120,000
H-7169 (1946) 1:80,000 (Reconn.)

A comparison between depths on the present survey and on these small-scale prior surveys reveals only minor differences of about 1 to 4 fathoms which are ascribed chiefly to inaccuracies in the tube and wire soundings on the prior surveys. Characteristic differences are listed below:

Charted Depth (fms.)	Present Depth (fms.)	Lat.	Long.
59	55	55° 44.0'	159° 07.0'
35	37	55° 36.5'	159° 21.5'
29	33	55° 32.2'	159° 35.7'
61	59	55° 31.0'	159° 12.2'
83	80	55° 27.3'	159° 27.3'

With the retention of a few bottom characteristics from H-3796, the present survey supersedes these prior reconnaissance surveys within the common area.

6. Comparison with Chart 8859 (Latest print date 8/27/51)
Chart 8862 (Temporary proof dated 8/24/52)

A. Hydrography

The charted hydrography originates principally with the prior surveys which need no further consideration.

The 36-fm. sounding charted in lat. 55° 35', long. 158° 54' from chart letter 411(1912) falls in 65-fathom depths on the present survey. The 36-fm. sounding is disproved by the closely spaced sounding lines on the present survey and should be disregarded. see review addendum

The present survey supersedes the charted information within the common area.

B. Aids to Navigation

There are no charted aids within the limits of this survey.

7. Condition of Survey

a. The sounding records are complete; the Descriptive Report covers all matters of importance.

b. No inadequacies in the smooth plotting were noted during preliminary verification and review. *see review addendum*

c. The preliminary verification of this survey was confined to critical soundings, unnatural bottom configuration, and crossing discrepancies. Several lines covering the general area have been verified and inked. Completion of the verification and inking is deferred until some future date, at which time the shoreline will be completed, junctional soundings will be transferred and the inspection of the depth curves will be made.

8. Compliance with Project Instructions

This survey adequately complies with the Project Instructions.

9. Additional Field Work Recommended

This is an excellent basic survey and no additional field work is required.

Examined and approved:

H. R. Edmonston
Chief, Nautical Chart Branch

H. Arnold Karo
Chief, Division of Charts

L. S. Hubbard
Chief, Section of Hydrography

Earl O. Heaton
Chief, Division of Coastal Surveys

ADDENDUM TO REVIEW

H-7927 (1951)

Verified and inked by - C.L. Tysor in Norfolk Office
Review Addendum by - R.E. Elkins 1-25-54
Inspected by - R.H. Carstens

The verification of this survey has been completed. Soundings and depth surves are now inked, the shoreline has been added and junctional soundings have been transferred to verified contemporary surveys.

Junctions with Contemporary Surveys

Adequate junctions were effected with H-7996 (1951-52) on the west and with H-8000 (1952) on the southwest. In several areas the soundings of H-7996 are one fathom greater than soundings on H-7927; however, the differences occur in 35-fathom depths and no depth curves are affected.

Comparison with Chart 8859 (Print date 8-27-51)
Chart 8802 (Print date 12-29-52)

Within the limits of the present survey the hydrography on Chart 8859 originates principally with the prior surveys discussed in the review; and is entirely superseded by the present survey. Soundings on Chart 8802 originating with the present survey before verification are not affected by minor changes made on the smooth sheet subsequent to chart application.

Condition of Survey

Completion of the verification reveals that the smooth plotting was well done.

Approved

H. Arnold Karo
Chief, Division of Charts

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

[illegible] 6 August 1952

Division of Charts: R. H. Carstens

Plane of reference approved in 18
volumes of sounding records for

HYDROGRAPHIC SHEET 7927

Locality Alaska Peninsula, Southwest Alaska

Chief of Party: G. E. Boothe in 1951
Plane of reference is mean lower low water, reading
4.5 ft. on tide staff at Chiachi Island
10.3 ft. below B. M. 1 (1951)

2.5 ft. on tide staff at Kupreanof Harbor
13.4 ft. below B. M. 1 (1914)

Height of mean high water above plane of reference is as follows:

Chiachi Island = 7.0 feet
Kupreanof Harbor = 6.9 feet

Condition of records satisfactory except as noted below:

Section of Tides

E.C. McKay

Chief, ~~Division of Tides and Currents.~~

U. S. GOVERNMENT PRINTING OFFICE 756675

NAUTICAL CHARTS BRANCH

SURVEY NO. H7927

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
25 July 52	8802	H.E. MacSwan	Before ~~After~~ Verification and Review applied in full.
2/10/54	8859	F.A.M.	[redacted] After Verification and Review Completely applied.
3-23-55	8502	[illegible]	~~Before~~ After Verification and Review
May 55	8802	G.T.E.	~~Before~~ After Verification and Review the chart 8859
[redacted]			
4-1-75	16556	B.W. Hamilton	[redacted] 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.