

7928

Diag. Cht. No. 8802-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. SU-4251 Office No. H-7928

LOCALITY

State ALASKA

General locality ALASKA PENINSULA

Locality SOUTH OF MITROFANIA ISLAND

194/51

CHIEF OF PARTY

G. E. Boothe

LIBRARY & ARCHIVES

DATE APRIL 15, 1952.

8262
7928

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. ~~4-7928~~

Field No. SU-4251

State ALASKA

General locality ~~Southwest Alaska~~ Alaska Peninsula

Locality ~~Alaska Peninsula - South Side~~ South of Mitrofanov Island

Scale 1:40,000 Date of survey July - September 1952

Instructions dated 8 March 1951

Vessel Ship SURVEYOR

Chief of party Commander Glendon E. Boothe

Surveyed by Ship's Officers

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

Fathograms scaled by

Fathograms checked by

Protracted by R. H. Tryon, Jr.

Soundings penciled by R. H. Tryon, Jr.

Soundings in fathoms ~~xxx~~ at ~~MLLW~~ and are based on a

REMARKS: velocity of sound of 2000ms/sec

7/66

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-7928
(FIELD NO. SU-4251)
1951

PROJECT:

This survey was initiated under CS-344 covered by instructions to the Commanding Officer, Ship SURVEYOR dated 8 March 1951.

SURVEY LIMITS AND DATES:

H-7927 and H-7928 should be considered at one time and together. In order to avoid excessive smooth sheet size for H-7927, it was necessary to plot five hundred forty two positions on H-7928. Appropriate notes have been entered in the record books and the table of statistics shows which positions of H-7927 have now been plotted on H-7928.

The survey is located on the south side of the Alaska Peninsula, south of Mitrofanina Island. It is between latitudes 55-30 and 55-52; longitudes 158-20 and 159-05. Junction is made on the west with contemporary survey H-7927. Field work started on 18 July and was ended 14 September 1951. The eastern section of hydrographic survey no. H-6880 (1943) is covered by the present work.

VESSEL AND EQUIPMENT:

All sounding was accomplished by the Ship SURVEYOR. The vessel was operated at full speed (9 to 10 knots) with a turning radius of about 400 meters. Submarine Signal Co. Model 808J fathometer No. 128S was used for all sounding. Tachometer reeds calibrated for a velocity of 800 fm/sec. were installed for the entire season. Shoran Set I #489: CRV T #724CRV was used for position location.

TIDE AND CURRENT STATIONS:

Portable tide gages were maintained at Chiachi Island in latitude 55-50.6, longitude 159-06.3 and at Kupreanof Harbor, latitude 55-47.4, longitude 159-21.0. Corrections were obtained 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.

No current stations were occupied.

SMOOTH SHEET:

The smooth sheet was constructed by hand by the Seattle Processing Office. The shoreline was transferred from film positives of T-8827 and T-8828 by means of the Saltzman projector. Control and topographic details were plotted and inked by the Processing Office. The transfer of all topographic details has been verified according to para. 757 of the Hydrographic Manual.

CONTROL STATIONS:

The adjusted triangulation used in the vicinity of Chiachi and Mitrofanina Islands is found in Folio V, pp 104,105 and 111. The location

of shoran station GULL is from 1951 triangulation by Glendon E. Boothe. Signals BUM and TED are from H-7924. The latter falls just off the sheet but maybe established for verification of the hydrography as described in para. 7121 of the Hydrographic Manual. Each of these signals was used one time on this survey.

SHORELINE AND TOPOGRAPHY:

Shoreline and topographic details are from film positives Nos. T-8827 and T-8828. Agreements with hydrographic surveys are or will be discussed in the reports of the inshore surveys.

SOUNDINGS:

All soundings were obtained with the 808J depth recorder No. 128S. Standard methods of operation and scanning were used and the usual corrections (except velocity) were applied to the soundings.

CONTROL OF HYDROGRAPHY:

The entire survey was controlled by two shoran stations; one located at WEDGE, 1913 and the other at GULL, 1951. The intersection of the two shoran arcs controlled the sounding lines except for a few fixes in the extreme northwestern position of the sheet which are plotted on one arc and a sextant angle on shore objects.

The shoran control checked quite well throughout the area of the sheet. There is evidence of variable currents in the offshore area. Small discrepancies in time were not adjusted and attributed to that cause.

ADEQUACY OF SURVEY:

The survey is complete and adequate to supersede prior surveys for charting.

The junction with contemporary survey H-7924 is satisfactory and no holidays or excessive differences exist. The junction with H-7927 is perfect, since the break comes in the middle of the sounding lines.

Depth curves can be adequately drawn at the junctions.

CROSSLINES:

Over ten percent of the lines run were crosslines. Out of a total of one hundred sixty seven crossings, one hundred twenty three crossed without discrepancy, thirty nine had discrepancies less than threepercent of the depth, and the maximum discrepancy was 3.9 percent of the depth.

Crossings adequate

COMPARISON WITH PRIOR SURVEYS:

A photostat of hydrographic survey 6880 was enlarged with the Saltzman projector from 1:120,000 to 1:40,000 and a tracing of the soundings made. Comparison with H-7928 was then effected with this overlay. Agreement is, in general, good with uniform discrepancies of from one to two fathoms noted over the entire area which ranges in depth from thirty eight to eighty nine fathoms.

COMPARISON WITH CHART:

A comparison was made with Chart No. 8802, 17th edition; 50-12/25 print. Fifteen charted soundings are contained in the area of H-7928. Five of these

soundings are not in agreement with H-7928 and fall outside the area of survey 6880. The comparisons of these five soundings is shown below:-

<u>Sounding</u>	<u>Chart 8802</u>	<u>Latitude</u>	<u>Longitude</u>	
H-7928				
62 ✓	52	55-43.8	158-26.2	See Review Par 6A
70 ✓	63	39.7	30.5	
57 ✓	52	41.9	36.2	
60 ✓	55	37.8	34.7	
85 ✓	47	30.7	42.8	

The charted 52 fathom sounding, listed first above, is one of the THETIS soundings listed in Item 11 of the preliminary review for project CS-279. There was no verification for any of the THETIS soundings and it must be presumed that they are in error either in position or depth.

DANGERS AND SHOALS:

There are no dangers or shoals within the limits of the present survey.

COAST PILOT INFORMATION:

Information under this heading is being compiled and will be the subject of a separate report.

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 dated 10 March 1952. The recommended landmark within the limit of the survey is as follows.

SPITZ ISLAND

GEOGRAPHIC NAMES: 254 ✓

No names other than those appearing on film positive No. T-8827 are recommended.

APPLICABLE DATA:

Fathometer Report - 29 February 1952
Landmarks for Charts - 23 March 1952
Coast Pilot Notes - Not yet submitted.

Filed with H-777233

Respectfully submitted,

Raymond H. Tryon, Jr.

Raymond H. Tryon, Jr.
Lieut. Comdr., USC&GS

STATISTICS FOR HYDROGRAPHIC SURVEY H-7928
(Field No. SU-4251)

<u>DATE</u>	<u>DAY LETTER</u>	<u>POSITIONS</u>	<u>STAT. MILES</u>
18 July 1951	1-3A (red)	4	1.2
23 July 1951	16-33D (red)	18	15.3
24 July 1951	(1-3E (red) (34-43E (red)	13	7.1
31 July 1951	(51-70H (red) (79-85H (red)	27	17.4
11 August 1951	(7-23K (red) (42-55K (red) (86-115K (red)	61	40.2
13 August 1951	29-85L (red)	57	30.8
14 August 1951	1-35M (red)	35	24.2
15 August 1951	47-48N (red)	2	0.7
16 August 1951	1-117P (red)	117	69.6
28 August 1951	84-96W (red)	13	9.5
10 September 1951	1-104X (red)	104	86.5
11 September 1951	(49-88Y (red) (143-193Y (red)	91	71.2
* 12 September 1951	A (blue)	101	81.4
* 13 September 1951	B (blue)	137	105.5
* 14 September 1951	C (blue)	73	62.1
	TOTAL	<u>853</u>	<u>622.7</u>

See records H-7927

TIDE NOTE

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
Kupreanof Harbor - 2.5 feet

Reductions to soundings were made without time or height correction.

APPROVAL SHEET

The field work on this survey was conducted under the personal supervision of Commander Glendon E. Boothe who has inspected the records and boat sheet.

The survey is believed complete and adequate for charting and complies with the instructions.



Riley J. Sips
Comdr. USC&GS
Comdg. USC&GSS SURVEYOR

RMC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

28 April 1952

Division of Charts: R. H. Carstens

Plane of reference approved in 3
volumes of sounding records for

HYDROGRAPHIC SHEET 7928

Locality Alaska Peninsula, Southwest Alaska

Chief of Party: G. E. Boothe in 1951
Plane of reference is mean lower low water, reading
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 6.9 feet.

Condition of records satisfactory except as noted below:

E. C. McKay

Section

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

GEOGRAPHIC NAMES

Survey No. H-7928

Name on Survey											
	A	B	C	D	E	F	G	H	K		
<u>Alaska</u>											1
<u>Alaska Peninsula</u>									B.G.H.		2
<u>Mitrofaniv Island</u>									"		3
<u>Spitz Island</u>											4
<u>Chiachi Island</u>									B.G.H.		5
											6
											7
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											27

Names underlined
in red are approved
4-22-52
L. Steck

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7928

Records accompanying survey:

Boat sheets 1; sounding vols. 3; wire drag vols.;
 bomb vols.; graphic recorder rolls 1 ^{Env};
 special reports, etc. 1 Descriptive Report; 1 Smooth Sheet; 1 Tracing (Enlarged

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

Number of positions on sheet	.....	955
Number of positions checked	.....	115
Number of positions revised	.....	2
Number of soundings revised (refers to depth only)	.....	65
Number of soundings erroneously spaced	.....	30
Number of signals erroneously plotted or transferred	.....	2
Topographic details	Time	.....
Junctions	Time	5 hr
Verification of soundings from graphic record	Time	50 hr
Prel. Verification by G.F. Jordan	1 hr	7-21-54
S. Rose	32	8-5-54
Verification by <u>G.F. Jordan</u>	Total time	55 Date 1-8-54
Reviewed by <u>G.F. Jordan</u>	Time	7 hr Date 7-21-54
Addendum <u>A.R. Stirni</u>	20 hr	2-9-56

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7928

FIELD NO. SU-4251

Alaska, Alaska Peninsula, South of Mitrofonina Island

Project No. CS-344

Surveyed from July to September 1951

Scale 1:40,000

Soundings:

Control:

808-J Fathometer

Shoran

Sextant angles on shore objects

Chief of Party - G. E. Boothe

Surveyed by - G. E. Boothe

Protracted by - R. H. Tryon, Jr.

Soundings plotted by - R. H. Tryon, Jr.

Preliminary Verification by - G. F. Jordan and S. Rose

- Verified and inked - *C. L. Tyser*

Reviewed by - G. F. Jordan, 21 July 1952

Inspected by - R. H. Carstens

1. Control and Shoreline

The control and shoreline for this survey are adequately described in the Descriptive Report.

2. Depth Curves and Bottom Configuration

The depth curves are adequately delineated.

The survey covers an area of generally smooth bottom marked by a local insular shelf and on the west by the eastern portion of 3-mile wide valley. The bottom on the insular shelf extending south-southeastward from Mitrofonina Island with 45- to 65-fm. depths is undulating. The smooth level valley extending shoreward from the southwestern limits of the survey is marked by a narrow submerged river bottom which is nearly 100 ft. deeper than adjacent 84-fm. depths in lat. $55^{\circ} 32.2'$, long. $158^{\circ} 36.4'$.

3. Crosslines

The crossline soundings are in general in excellent agreement.

4. Junctions

As noted in the Descriptive Report, the present survey and H-7927 on the west were accomplished simultaneously. H-7928 is the first of the new surveys to be received. Junctions will be considered in the review of the adjoining surveys,

5. Comparison with Prior Surveys

The only prior survey covering this area is H-6880 (1943) which shows six sounding lines crossing the present survey in a strip 5 miles wide. Although the survey, 1:120,000, was of reconnaissance nature, the soundings are in general comparable with present depths - within 1 to 2 fms. in 38- to 85-fm. depths. The present survey adequately supersedes H-6880 in the common area.

6. Comparison with Chart 8859 (Print of 51-8/27)
Chart 8802 (Print of 52-5/19)
Chart 8502 (Print of 51-4/16)
Chart 9302 (Print of 52-2/11)

A. Hydrography

Chart 8859 shows no soundings in the area of the present survey. The hydrography on Charts 8802, 8502 and 9302 is from H-6880 (Par. 5 above) and from miscellaneous reconnaissance sources. The 47-fm. sounding originally charted in 1908 in lat. $55^{\circ} 31'$, long. $158^{\circ} 43'$, from an undetermined source, falls in the 84-fm. valley on the present survey. Other charted soundings also conflict to a lesser degree with present depths. Rocky bottom characteristics on the charts also appear to conflict with the mud, sand, and gravel characteristics obtained on the present survey.

The present survey completely supersedes all the charted hydrography in the common area.

B. Aids to Navigation

There are no charted aids to navigation in the area of the present offshore survey. The survey revealed no dangers to navigation which might require marking.

7. Condition of the Survey

Preliminary verification of this survey was limited largely to an inspection for crossings discrepancies and unnatural depths and bottom configuration. No inadequacies in smooth plotting were noted. Complete verification and inking is deferred until a later date.

8. Compliance with Project Instructions

The survey adequately complies with the project instructions.

9. Additional Field Work

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

Examined and approved:



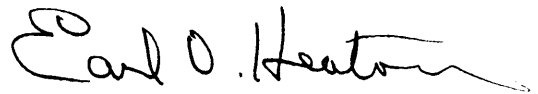
H. R. Edmonston
Chief, Nautical Chart Branch



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-7928 (1951)

Inked by - C. L. Tysor
Review Addendum by - A. R. Stirni 2/9/56
Inspected by - R. H. Carstens

The Verification of this survey is now complete.

Junctions with Contemporary Surveys

Adequate junctions were effected on the northwest with survey H-7924 (1951), and on the west with survey H-7927 (1951). The junction, on the north in the vicinity of Spitz Island, will be considered in the review of survey H-7925 (1951). Project surveys adjoining in the other areas have not been received in this office.


Comparison with Chart 8859 (print date 5/31/54)
Chart 8802 (print date 12/29/52)

The charted hydrography originates with the present survey after preliminary verification and review. All charted information is in accord with the present survey.

Condition of Survey

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

Approved:


E. R. McCarthy
Chief, Chart Division

CHIACHI ISLAND

H-7928

Ted

GHI 1945

SAP

POI

2803

2809

159° 10'

55° 50'

POI & SAP - sealed & checked

08'

06'



NAUTICAL CHARTS BRANCH

SURVEY NO. H-7928

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
10/24/52	8802	J. T. Medson	Before After Verification and Review
1/8/54		L. J. Jago	Before After Verification and Review
2/10/54	8859	J. G. M.	Before After ^{Preliminary} Verification and Review
2 Jan 61	930v	Tuehols	Before After Verification and Review Thru 880v
4-1-75	16556	B. W. Hamilton	Before After Verification and Review
			Before After Verification and Review
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			Before After Verification and Review

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.