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Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. PATTON, Director

State: ALASKA

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 41-34 (Field)
Hydrographic }

LOCALITY

Krenitzin Islands

~~APPROACHES TO UNALGA PASS~~

~~SOUTH OF AKUTAN ISLAND~~

Unalga Pass to Avatanak Strait

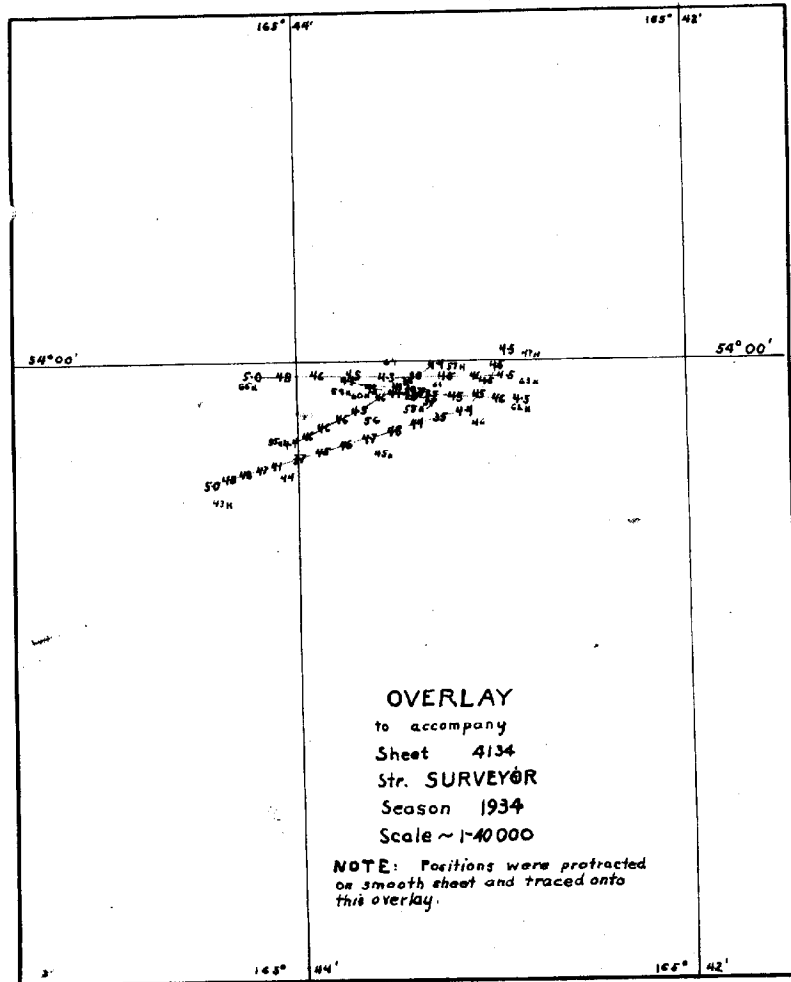
U. S. C. & G. S. S. SURVEYOR

193 4

CHIEF OF PARTY

A. M. SOMMERALSKI, H. & G. E.

5728



DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

| | |
|-------------------------------------------------------|----------|
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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.

Field No. 4134

REGISTER NO. 5728

State Alaska

General locality ~~Approaches to Unalga Pass~~ Krenitzin Islands

Locality ~~South of Isatan Island~~ Unalga Pass to Avatanak Strait

Scale 1-40,000 Date of survey June - Sept., 1934

Vessel U.S.C. & G.S.S. SURVEYOR

Chief of Party A.M. SOBIERALSKI

Surveyed by A.M. SOBIERALSKI, L.C. WILDER, R.C. ROWSE.

Protracted by H.C. APPLEQUIST

Soundings penciled by H.C. APPLEQUIST

Soundings in fathoms ~~feet~~

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by

Verified by S.M. Green Jr.

Instructions dated April 13, 1934

Remarks:

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET FIELD NO. 41-34 (H-5728)

APPROACHES TO UNALGA PASS

SOUTH OF AKUTAN ISLAND, ALASKA

Scale 1-40,000

U.S.C. & G.S.S. SURVEYOR

A. M. SOBIERALSKI - CHIEF OF PARTY

INSTRUCTIONS DATED: April 13, 1934. Project No. HT 176.

LIMITS: This sheet covers an area southward of Akutan Island, Unalga and Akutan Passes, extending from Rootok Island to Unalaska Island. A scale of 1-40,000 was selected because the area could not be covered on a scale of 1-20,000 and a scale of 1-80,000 is too small to show the irregular character of the bottom. ←

SURVEY METHODS: The hydrography on this sheet was executed by the ship. Soundings are all with the fathometer. The fathometer soundings were reduced in accordance with the Hydrographic Manual, using a correction for temperature and salinity. For more detailed explanation of the method of arriving at these corrections, see the season's report. ←

The ship worked in the area covered by this sheet at odd times when weather was unfavorable for work further offshore, so that most of the work was accomplished under conditions of poor visibility or rough weather or both. In addition to these difficulties, strong currents occur in this area. As a result, the lines show rather unusual irregularities and in frequent cases it was necessary to use rather weak fixes. This is particularly true regarding positions 41-50, 62-75, and 89-98 D day. These positions are almost swingers, but they were carefully plotted, using courses and distances in addition to the angles, and it is believed that the positions as plotted are logical. ←

COMPARISON WITH PREVIOUS SURVEYS: This area ^{is} shown on H2541, scale 1-80,000, which is little more than a reconnaissance. One important difference between the two surveys is a bank with a depth of 19 fathoms shown on H 2541 in Lat. 53-55.3, Long. 165-53.8, which falls in an area of about 40 fathoms on the new survey. It is true that there is a small area with a depth of 31 fathoms in about this locality, but it could hardly be the bank indicated on H 2541. It is further noted that the soundings on H 2541 have a question mark after them indicating some doubt as to position or the accuracy of the soundings. It would appear that this line was badly misplaced, and that the soundings possibly

The positions are correct but Sdgs are 20 fms too shoal which was noted at the time, & Sdgs questioned.

were obtained on the bank in approximate Lat. 53-52, Long. 165-59. The erroneous soundings should be removed from the chart. Otherwise the main features of the hydrography are in agreement between the two sheets. As there are only a few soundings on the earlier survey within the area covered by this sheet, it may well be considered as superseding that part of the earlier survey included within the limits.


DATUM: This sheet was plotted with the positions obtained from the 1934 field computations. There is a slight difference between this datum and that used on the contemporary topographic sheets and on the survey sheets made in 1901, but as the difference is not over 10 meters it is practically negligible.

DANGERS: The bank mentioned above has been developed on H-5738 (Field No. U 22-34). In Lat. 54-01.4, Long. 165-51.1 about 1.6 miles southeastward of Battery Point a depth of 15 fathoms was found. This spot is on the edge of completed work and was not developed. From the steep slope, it appears possible that shoaler water exists in this vicinity, and for this reason it should be avoided.

OVERLAY: A small tracing accompanies this sheet, showing soundings in a congested area in Lat. 54-00, Long. 165-43. The positions have been indicated on the smooth sheet, but there was no room to show the soundings legibly.

→ sdg's plotted on smooth sheet
S.M.G.

Respectfully submitted,


A. M. SOBIERALSKI,
Commanding, Str. SURVEYOR

STATISTICS

HYDROGRAPHIC SHEET FIELD NO. 41-34

| Date | Volume | Day | Statute Miles | Positions | Soundings |
|---------|--------|-----|---------------|-----------|------------|
| 6- 8-34 | 1 | A | 16.8 | 43 | 99 |
| 6-13-34 | 1 | C | 7.1 | 19 | 41 |
| 6-20-34 | 1 | D | 34.0 | 79 | 276 |
| 6-20-34 | 2 | D | 31.2 | 61 | 252 |
| 6-21-34 | 2 | E | 10.6 | 30 | 120 |
| 6-24-34 | 2 | F | 74.0 | 179 | 910 |
| 6-25-34 | 2 | G | 14.1 | 34 | 181 |
| 6-25-34 | 3 | G | 94.7 | 211 | 967 |
| 6-26-34 | 3 | H | 29.5 | 100 | 394 |
| 7- 5-34 | 3 | J | 15.1 | 34 | 222 |
| 7- 5-34 | 4 | J | 20.5 | 24 | 163 |
| 7-18-34 | 4 | K | 47.0 | 93 | 408 |
| 7-26-34 | 4 | L | 35.7 | 92 | 264 |
| 8-13-34 | 4 | M | 11.9 | 33 | 122 |
| 8-17-34 | 4 | N | 32.3 | 62 | 310 |
| 8-17-34 | 5 | N | 5.4 | 8 | 48 |
| 8-29-34 | 5 | P | 35.8 | 80 | 388 |
| 9- 5-34 | 5 | Q | 56.3 | 124 | 581 |
| 9-27-34 | 5 | R | 6.8 | 12 | 66 |
| 9-28-34 | 5 | S | 3.2 | 6 | 32 |
| 9-27-34 | 5 | T | <u>12.7</u> | <u>29</u> | <u>137</u> |
| | | | 594.7 | 1,353 | 5,981 |

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **5728**

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

| | |
|------------------------------------------------------|----------------------|
| Number of positions on sheet | <i>1353</i> |
| Number of positions checked | <i>59</i> |
| Number of positions revised | <i>7</i> |
| Number of soundings recorded | <i>5981</i> |
| Number of soundings revised | — |
| Number of signals erroneously plotted or transferred | — |

Date: *7/30/35*

Verification by *S. M. Green Jr.*

Review by *Harry T. Welsh*

Time: *8 $\frac{4}{7}$ days*

Time: *11 hrs*

HYDROGRAPHIC SURVEY NO. 5728

Smooth Sheet 1

Boat Sheet No

Sounding Records 5 Vols. _____

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol. 1 Page 2

Landmarks for Charts (Form 567) Filed with Letter #324 (1935)

Statistics Filed in D.R.

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None received April 26 '35

Special Chart for Lighthouse Service None Received April 26, '35
(Circular Nov. 30, 1933) *(No floating aids)*

Remarks 1 Overlay Tracing

check up.
may be Uralaska Island →

200

TIDE NOTE FOR HYDROGRAPHIC SHEET

May 23, 1935.

Division of Hydrography and Topography:

✓ Division of Charts: Attention Mr. E. P. Ellis

Tide Reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 5728

Locality Unalga Pass to Avatanok Strait, Aleutian Islands, Alaska

Chief of Party: A. M. Sobieralski in 1934
Plane of reference is mean lower low water, reading
3.1 ft. on tide staff at Biorka Village
12.6 ft. below B.M. 1

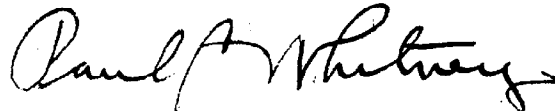
3.7 ft. on tide staff at Dutch Harbor
12.5 ft. below B.M. 1

3.7 ft. on tide staff at Trident Bay
5.9 ft. below B. M. 1

Height of mean higher high water above plane of reference is 4.9 feet

Biorka Village; 3.7 feet at Dutch Harbor; and 4.3 feet at Trident Bay.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5728 (1934) - FIELD NO. 4134

Unalga Pass to Avatanak Strait, Alaska
Surveyed in June - September, 1934
Instructions dated April 13, 1934 (SURVEYOR)

Fathometer Soundings.

3 Point Fixes on Shore Signals.

Chief of Party - A. M. Sobieralski.
Surveyed by - A. M. Sobieralski, L. C. Wilder, R. C. Rowae.
Protracted by - H. C. Applequist.
Soundings penciled by - H. C. Applequist.
Verified and inked by - S. M. Green, Jr.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual except that the boatsheet has not been received in the office.

The Descriptive Report is clear and comprehensive, and adequately covers all matters of importance.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey adequately satisfy the instructions for the project.

3. Sounding Line Crossings.

Such crossings as occur in the work are in good agreement, and adjacent parallel lines are consistent.

4. Depth Curves.

All the usual depth curves may be satisfactorily drawn.

5. Junctions with Contemporary Surveys.

- a. The junction with H-5744 (1934) on the northeast and H-5763 (1934) on the east are satisfactory.
- b. The junction with H-5759 on the south and H-5738 on the west are satisfactory.
- c. The junction with H-5762 (1934) on the east and north is satisfactory. The gap between the two surveys westward of long. 165° 47' at the western limit of H-5762 (1934) will no doubt be taken care of when work is extended into Akutan Pass.

- d. The junction with H-5745 (1934) on the northwest is only fair, the fathometer soundings on the present survey averaging about 2 fathoms shoaler than the wire soundings on H-5745 (1934). As noted in the Descriptive Report of H-5745 (1934), it is possible that due to the strong currents in Unalga Pass the wire soundings are somewhat too deep and the fathometer soundings too shoal.

6. Comparison with Prior Surveys.

H-2541 (1901), H-2542 (1901).

With the exception of a few soundings in Avatanak Strait, included on H-2542 (1901), the entire area of the present survey is covered by H-2541 (1901) with very sparse development. There is an excellent agreement with the present work with the following exceptions:

- a. Positions 20 to 22N on H-2541 (1901) were incorrectly plotted but in the corrected positions are in fair agreement.
- b. Positions 37 to 38M on H-2541 (1901) appear slightly out of place and should not be used for charting. Both are deep water soundings.
- c. Positions 11 to 13L' on H-2541 (1901) are manifestly 20 fathoms too shoal. The soundings were questioned at the time of the survey, with a reference note that they were probably too shoal in the above amount. With this correction they are in excellent agreement, and these soundings as now charted should be expunged from the chart.
- d. Two soundings originating with H-2541 (1901) were charted incorrectly; a 37 fathoms at lat. $33^{\circ}56.0'$, long. $166^{\circ}02.2'$ was charted as 57, and a 54 fathom at lat. $53^{\circ}54.5'$, long. $166^{\circ}08.7'$ was charted as 44, on chart 8800 (corrected as of May 5, 1934). These soundings should be expunged from the chart.

The present survey adequately covers this area and with the exception of a slightly shoaler sounding at lat. $54^{\circ}03.7'$, long. $165^{\circ}39.4'$, which was carried forward as the surrounding soundings are in agreement, should supersede this prior survey for charting.

7. Comparison with Chart No. 8860.

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and contains no additional information that needs consideration in this review.

8. Field Plotting.

Field protracting and plotting were excellent and conform to the requirements of the Hydrographic Manual.

9. Additional Field Work Recommended.

When work is resumed in this locality the gap between the present survey and H-5762 (1934) between long. $165^{\circ}47'$ and the western limit of H-5762 (1934) should be filled in with a development of the 15 fathom sounding at lat. $54^{\circ}01.3'$, long. $165^{\circ}51.1'$.

10. Superseding Old Surveys.

Within the area covered the present survey, with the indicated additions from previous surveys, supersedes the following surveys for charting purposes:

H-2541 (1901) in part.
H-2542 (1901) " "

11. Reviewed by - Harry T. Kelsh, August 15, 1935, and R. J. Christman, August 21, 1935.

Inspected by - A. L. Shalowitz.

Examined and approved:

K. T. Adams

K. T. Adams,
Asst. Chief, Division of Charts.

R. C. Lobnitz

Chief, Division of Charts.

F. S. Borden

Chief, Section of Field Work.

G. H. de

Chief, Division of H. & T.

H-5728

7/30/35

The soundings are sufficient to draw all curves completely. It was necessary to correct the curves as drawn by the field platter.

The work checks well on cross lines and with adjoining sheets. The soundings on the overlap tracing attached to the descriptive report have been transferred to the H.S.

Between pos. 67 and 68K, 2 and 3' L and between 17 and 18' L, mention is made of tide rips in the record. These have not been noted on the H.S. as the information concerning same is not definite.

The vertical east at pos. 52' L day (^{53°-55.7}/_{166°-02.9}) has been plotted in pencil due to an error in ~~recording~~ recording the right angle for this fix. The angle is shown as ~~66-03~~ ^{should be} 66-03 and as there is no B.S. for this survey the pos. can not be verified.

The verifier was advised that it would not be necessary to show the shore line for this sheet, the topo. sheets are on a scale of $\frac{1}{20,000}$ and all the shore line appears on adjoining sheets.

S. M. Green Jr.

| | | |
|--------|------------|-------------------|
| * 5762 | Holiday at | Lat 54° 02' |
| 5759 | 012 | Long 115° 46' 52" |
| 5760 | | |
| 5738 | | |
| 5740 | | |

Applied to charts 8860, 8802 + 9302 - Oct 10 - 1935

P. B. Carter.

25 Jan 2, 1936

E. D.

Applied to new compilation of Chart No. 9007 (extended)
S. R. Aug. 1938.

Applied to Chart Comp. 9018 H. MacEwen Aug. 25, 1939
" " " " 8720 J. H. S. Mar. 31, 1943