

7675

Diag. Cht. No. 8252-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. PA-05348 Office No. H-7675

LOCALITY

State S. E. Alaska

General locality Neva Strait

Locality Entrance Island to Whitestone Narrows

194 8

CHIEF OF PARTY

G. E. Boothe

LIBRARY & ARCHIVES

DATE August 8, 1950

7675  
9292

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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-7675

Field No. PA-05348

State S. E. Alaska

General locality Neva Strait

Locality Entrance Island to  
~~Central Neva Strait and Whitestone Narrows~~

Scale 1 : 5,000 Date of survey 16 July - 12 Aug. 1948

Instructions dated 5 August 1947

Vessel PATTON - Launch No. 92

Chief of party Glendon E. Boothe

Surveyed by Glendon E. Boothe and Ira R. Ribottom

Soundings taken by fathometer, graphic recorder, hand lead, wire 808-A Depth Recorder and Hand Lead

Fathograms scaled by P. T. P.

Fathograms checked by A. L. W.

Protracted by Clarence R. Lehman

Soundings penciled by Clarence R. Lehman

Soundings in fathoms ~~XXXX~~ at MLLW <sup>& tenths</sup> Fathoms at M. L. L. W.  
and are true depths

REMARKS: Smooth sheet and plotting by Seattle Processing Office.

DESCRIPTIVE REPORT TO ACCOMPANY  
HYDROGRAPHIC SURVEY H-7675 (PA-05348)

NEVA STRAIT

SCALE 1:5,000 - DATE 1948

USC&GSS PATTON, GLENDON E. BOOTHE, COMDG.

A. PROJECT:

Authority for field work is contained in the Instructions for Project CS-247 issued by The Director on 5 August 1947.

B. SURVEY LIMITS AND DATES:

This sheet covers Neva Strait from the southern side of Whitestone Narrows to Entrance Island. Junction was made on the south with H-7674 (PA-05248) and on the north with H-7676 (PA-1148).  
(1947) (1948)

Field work was started on 16 July 1948 and was completed on 12 August 1948.

C. VESSEL AND EQUIPMENT:

All hydrography was done in Launch No. 92 operating from the PATTON. Soundings were taken with an 808 recording fathometer, No. 51, supplemented by hand lead on shoals and in kelp, and for bottom samples.

D. TIDE AND CURRENT STATIONS:

The tide station at Sitka was used for the reduction of soundings for the entire area.

Current stations were occupied off Highwater Island in Lat.  $57^{\circ} 16.84'$ , Long.  $135^{\circ} 35.98'$ , and off Wyvill Reef in Lat.  $57^{\circ} 16.37'$ , Long.  $135^{\circ} 35.40'$ .

The Roberts Automatic Current Buoys were used and a separate report has been submitted covering these observations.

E. SMOOTH SHEET:

The smooth sheet <sup>was</sup> ~~will~~ be constructed and plotted by personnel of the Seattle Processing Office.

F. CONTROL STATIONS:

Second order triangulation was carried through Neva Strait during the current season. The records, computations and a special report have been forwarded to the Washington Office.

Topographic stations were located by graphic control methods on aluminum mounted sheets, Nos. ~~T-7089b~~ (PA-D-48), ~~T-7090a~~ (PA-E-48) and ~~T-7090b~~ (PA-F-48). (Desc. Reports attached to present survey) <sup>Desc. Report w/ H-7673(1948-52)</sup>

G. SHORELINE AND TOPOGRAPHY:

The shoreline and topography <sup>were</sup> ~~will~~ be compiled from air photographs of the area which were field inspected by this party. Short sections of shoreline were rodded in at the various plane table setups, and most of the rocks and limits of reefs were located in Whitestone Narrows at minus tide. Delineation of the shoreline will be difficult because of overhanging trees.

The low water line could not be established by hydrography in most places. The shoreline is very abrupt and rocky with overhanging trees. Sounding lines were run as close to the beach as circumstances would permit and numerous detached positions were taken

Review,  
par. 1.

with the bow of the launch against the shoreline.

H. SOUNDINGS:

Soundings were taken with an 808 type recording fathometer, No. 51, operated on the fathom scale. Hand lead soundings were taken in critical areas, in kelp, and for obtaining bottom samples.

Velocity corrections to fathometer soundings were computed from serial temperature and salinity observations made at the southern end of Olga Strait and at the northern end of Neva Strait.

I. CONTROL OF HYDROGRAPHY:

The hydrography is controlled by three point sextant fixes on signals ashore. No unusual or substandard methods were used for this purpose.

J. ADEQUACY OF SURVEY:

The survey is adequate to supersede<sup>s</sup> previous surveys of this area. The junction with surveys enumerated in "B" are good.

K. CROSSLINES:

The crosslines of this sheet constitute 15% of the total miles of soundings including development. The crossings are good.

L. COMPARISON WITH PREVIOUS SURVEYS: *See Review, par. 5*

The last previous survey of this area was made in 1896 on a scale of 1:5,000, Sheet No. H-2288. The lines were widely spaced, but in general shoal areas were reasonably well developed, especially in Whitestone Narrows. Over most of this area, the depths are in very close agreement, but the present survey is much

more complete. The topographic party covered this area during a period of minus tide and rodded in the limits of the majority of the reefs and rocks. The hydrographic party cruised over the area on several occasions at minus tide and located numerous additional sunken rocks, which are adequately noted on the boat sheet. A combination of the data on <sup>graphic control</sup> ~~topographic~~ sheet No. ~~T-7089b~~ (PA-D-48) <sup>\*</sup> *\* subsequently destroyed* and the numerous notes on the hydrographic sheet will furnish an adequate and complete delineation of the rocks and reefs in this area.

Comparison of Shoals shown on Previous Survey:

(1) Two - 1/4 fathom soundings near west shore of Whitestone Narrows, between triangulation stations GRAZE and BAND 2 in Lat.  $57^{\circ} 14.5\frac{5}{4}'$ , Long.  $135^{\circ} 33.97'$ . These soundings are believed to be erroneous as very closely spaced lines were run over the area with the fathometer with no indication of a shoal, and there was no evidence of pinnacle rocks at this point observed while cruising in the area at periods of minus tide.

*Review,  
par. 5b.*

(2) Least depth shown on previous survey at a point about 80 meters north of extreme northern tip of Whitestone Point, Lat.  $57^{\circ} 14.82'$ , Long.  $135^{\circ} 33.65'$ , is 1-3/4 fathoms. A rock was observed to bare at this point at extreme minus tide and is located by position 7-b with a least depth of <sup>2/10</sup> ~~3/10~~ fathom.

(3) 1-3/4 fathom shoal across the channel from Columbine Rock in Lat.  $57^{\circ} 15.\frac{84}{10}'$ , Long.  $135^{\circ} 34.73'$ .

A thorough development of this shoal showed a least depth at this point of <sup>3/10</sup> ~~4/10~~ fathom, position 23-f.

Additional shoals in this specific locality are as follows:

(a) In Lat.  $57^{\circ} 15.87^{\prime}$ <sup>6</sup>, Long.  $135^{\circ} 34.75^{\prime}$ , is a least depth of  $4/10$  fathoms, Positions 22, 24, and 25-f.

(b) In Lat.  $57^{\circ} 15.80^{\prime}$  Long.  $135^{\circ} 34.71^{\prime}$ , is a least depth of 1 fathom, Position 17-f.

(c) In Lat.  $57^{\circ} 15.81^{\prime}$ , Long.  $135^{\circ} 34.65^{\prime}$ , is a least depth of  $1-9/10$  fathoms, Position 26-f.

(4)  $-1/4$  fathom sounding at the southwest corner of Wyvill Reef in Lat.  $57^{\circ} 16.36^{\prime}$ , Long.  $135^{\circ} 35.34^{\prime}$ . A thorough development of this area and an investigation at minus tide failed to reveal such a sounding at this particular point. The extreme southern tip of the reef extends almost to this point and is located by Position 30-h.

The limits of this reef are as indicated on the boat sheet. *(Limits of reef as shown on present survey are in substantial agreement with the prior survey and are adequate for charting)*

(5) 2 fathom soundings northwest of Wyvill Reef in Lat.  $57^{\circ} 16.45^{\prime}$ , Long.  $135^{\circ} 35.37^{\prime}$ . An investigation of this area at low water reveals a rock that bares at M.L.L.W., Position 34-h. It is marked by a small detached patch of kelp.

(6)  $3-1/4$  fathom sounding<sup>on H-2288 (1896)</sup> located 70 meters south of southern end of High Water Island in Lat.  $57^{\circ} 16.80^{\prime}$ , Long.  $135^{\circ} 35.75^{\prime}$ . This sounding is listed, on preliminary review sheet furnished with instructions for the project, as questionable sounding No. 2.

A complete development and investigation of the area at low water with the hand lead revealed a sounding of  $3-1/10$  fathoms at M.L.L.W., Position 71-k.

(7)  $2-1/2$  fathom sounding west of the northern end of High Water Island in Lat.  $57^{\circ} 16.86^{\prime}$ , Long.  $135^{\circ} 36.05^{\prime}$ .

This sounding is listed as questionable sounding No. 1, on preliminary review sheet furnished with instructions for the

Review,  
par. 5a.

project.

A thorough development of this area and an investigation with the hand lead at low tide revealed a least depth of 3-5/10 fathoms at M.L.L.W., Position 188+j. It seems fairly certain that there is no depth as low as 2-1/2 fathoms at this point. *Concur; see Review, par. 5a.*

(8) 2-3/4 fathom shoal on the west side of the channel across from Entrance Island in Lat. 57° 17.44', Long. 135° 36.60'.

A thorough investigation of this shoal with the hand lead at low water shows a least depth of 2-4/10 fathom at M.L.L.W., Positions 155, 156 and 157-j. A small kelp patch marks the area.

Additional shoals not shown on previous survey:

(1) A least depth of 6-7/10 fathoms at M.L.L.W., Position 56-k is located in Lat. 57° 17.10', Long. 135° 36.<sup>30</sup>80'.

No other shoals or dangers were found except in close proximity to the shoreline or other known reefs and rocks.

M. COMPARISON WITH CHART NO. 8281: *Review, par. 6*

The comparisons drawn in "L" are applicable when comparison is made between the new survey and the October 1947 edition of Chart No. 8281.

N. DANGERS AND SHOALS:

This subject is covered in "L".

O. COAST PILOT NOTES:

See Special Report on Coast Pilot for Sitka Sound to Salisbury Sound.



P. AIDS TO NAVIGATION:

See letters to The Director dated 24 July 1948, 14 August 1948, and 29 September 1948, copies of which are attached hereto. (See triangulation data for positions of Whitestone Point Light, Entrance Island Light and Columbine Rock Daybeacon).

Q. GEOGRAPHIC NAMES: *254*

The name "Columbine Rock" for the rock, located on the west side of the channel about midway through the narrow part of Neva Strait, is used in the light list in describing the beacon located on the rock.

The origin of the name is not known, but since it is used in the light list, it is recommended that it be used for charting purposes.

There are no other new names or changes in charted names of geographic features.

S. SILTED AREAS:

None.

Z. TABULATION OF APPLICABLE DATA:

The following listed Special Reports are pertinent to this survey and report:

- (1) Air Photo Inspection Report
- (2) Descriptive Reports to Accompany <sup>graphic control</sup> ~~topographic~~ sheets ~~#-7089b~~ (PA-D-48), ~~#-7090a~~ (PA-E-48) and ~~#-7090b~~ (PA-F-48). *attached to H-7673(1948-52) ↑ (attached to D.R. of present survey)*
- (3) Temperature and Salinity Observations
- (4) Coast Pilot Notes
- (5) Current Report
- (6) Triangulation Report

Applicable Data Attached to this Report:

- (1) Table of Statistics
- (2) Tide Note ✓
- (3) List of Signals
- (4) Tables of Velocity Corrections (2)
- (5) Letters to The Director (copies) dated 24 July 1948, 14 August 1948, and 29 September 1948, subject - Positions of Floating Aids to Navigation, Olga and Neva Straits.

Submitted by



Ira R. Rubottom  
Lt. Comdr., USC&GS  
USC&GSS PATTON

APPROVAL SHEET TO ACCOMPANY


SHEET PA-05348 (H-7675)

The hydrography on this sheet was executed under my direct supervision as a member of the hydrographic party.

The sounding records and boatsheet have been approved by me. These records were inspected daily during the survey. It is my opinion that the survey is adequate and that no additional work is required.

The smooth sheet is to be constructed, and plotted by the Seattle Processing Office. The tidal data was supplied by the Washington Office from the records of the standard tide gage at Sitka.

The area covered by this survey is in general uniform, but cut up by many shoals and rocks. Closely spaced lines were run and drift hand lead was used on all shoals, rocks, and kelp patches to determine the least depths. This area was carefully searched over at low water, and at minus tides to locate all rocks and shoals. Ample cross lines were run.

  
Glendon E. Boothe  
Comdr., USC&GS  
Comdg., USC&GS PATTON

H 7675  
Pa 05348

SE Alaska  
Neva Strait

Processing Office Notes.

Smooth sheet.

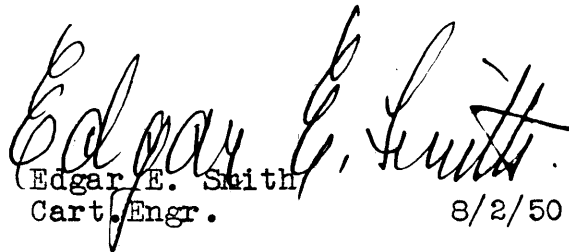
The projection was made by hand on Whatman paper. The short stretches of shoreline were rodded in on the graphic control sheets ~~T 7089~~ and ~~T 7090~~ from which topographic signals were taken. Triangulation GP's are from the field computations of Boothe 1948. Datum is NA 1927.

} Review, par. 1

Kelp.

On account of the numerous soundings kelp has not always been shown adequately. It is suggested that this item be checked against the boatsheet after the smooth sheet is inked. ✓

Crossings are good. Aids and dangers have been pointed out with arrows on the smooth sheet. ✓  
Other subjects have been covered in the report of the field party.

  
Edgar E. Smith  
Cart. Engr. 8/2/50

## LIST OF HYDROGRAPHIC SIGNALS

SHEET H-7675 (PA-05348)

NEVA STRAIT, S. E. ALASKA

HYDROGRAPHIC NAME	SOURCE	HYDROGRAPHIC NAME	SOURCE
Act	Tri. Sta. ACT 1896-1948	Ink	Tri. Sta. DRINK 2 1948
Adze	Tri. Sta. ADZE 1896-1948	Ion	PA-F-48
Ail	Tri. Sta. AIL 2 1948	Joe	PA-E-48
Aim	PA-F-48	Liz	PA-E-48
Ate	Tri. Sta. GRATE 1896-1948	Nig	PA-D-48
Arm	PA-E-48	Nix	PA-E-48
Balk	Tri. Sta. BALK 2 1948	Nut	PA-F-48
Band	Tri. Sta. BAND 2 1948	Oak	PA-E-48
Bea	Tri. Sta. COLUMBINE RK. DAY-BEACON 1948	Off	PA-F-48
Bed	PA-F-48	Pin	PA-E-48
Bot	Tri. Sta. BOTCH 2 1948	Pit	PA-F-48
Box	PA-E-48	Rat	PA-E-48
Cal	Tri. Sta. CALM 2 1948	Rig	PA-F-48
Cat	PA-F-48	Ris	PA-E-48
Clot	Tri. Sta. CLOT 2 1948	Sad	PA-E-48
Cow	PA-E-48	Sai	Tri. Sta. SAINT 1948
Den	Tri. Sta. ALDEN 1948	Sam	PA-F-48
Dew	Tri. Sta. DEW 2 1948	Ton	Tri. Sta. WHITESTONE PT. LIGHT 1948
Dike	Tri. Sta. DIKE 2 1948	Toy	PA-E-48
Dint	Tri. Sta. DINT 2 1948	Try	PA-F-48
Dog	PA-E-48	Tub	PA-F-48
Dud	PA-F-48	Use	PA-E-48
Ear	Tri. Sta. EARL 2 1948	Vex	PA-E-48
East	Tri. Sta. EAST BASE 2 1948	Wag	PA-F-48
Eat	PA-F-48	West	Tri. Sta. WEST BASE 1896-1948
Egg	PA-E-48	Yes	PA-F-48
Fag	Tri. Sta. FAG 2 1948	Zeal	Tri. Sta. ZEAL 1948
Fal	Tri. Sta. FALL 1896-1948		
Fin	PA-E-48		
Fle	Tri. Sta. FLEET 1896-1948		
Fly	PA-F-48		
Graze	Tri. Sta. GRAZE 1896-1948		
Grim	Tri. Sta. GRIM 2 1948		
Gum	PA-E-48		
Gus	PA-F-48		
His	PA-F-48		
Hit	PA-D-48		
Hug	PA-E-48		

SHIP PATTON

P.O. Box 158, Sitka, Alaska.

24 July 1948.

To: The Director,  
U.S. Coast and Geodetic Survey,  
Washington 25, D.C.

Subject: Positions of Floating Aids to Navigation - Neva Strait, Alaska.

The buoys listed below were located at or near slack water by sextant angles to signals located on triangulation stations. The launch was held alongside the buoy in each case. The locations were plotted on Boat Sheet PA-05118, and positions scaled and checked. Predicted tides were used for reduction of soundings. The datum is North American 1927 - field computations. All data subject to Office verification. All buoys are on Chart 8281.

- Neva Strait. Whitestone Narrows Rock Lighted Buoy 1. (Fl.G.)  
(USCG Light List, 1948, No. 2397, Page 338.)  
Located 16 July 1948, Position 329a. Depth at buoy - 10.2 fathoms.  
Lat. 57 14' 33.4" (1633 meters) N.  
Long. 135 33' 42.0" (705 meters) W.
- Neva Strait. Whitestone Narrows Buoy 3. (USCG Light List, 1948, Page 419 -  
Black, 2d-cl. iron spar)  
Located 16 July 1948, Position 330a. Depth at buoy - 6.9 fathoms.  
Lat. 57 14' 48.7" (1508 meters) N., *Moved*  
Long. 135 33' 47.1" (790 meters) W.
- Neva Strait. Whitestone Narrows West Channel Buoy 5.  
(USCG Light List, 1948, Page 420. Black 2d-cl. iron spar)  
Located 16 July 1948, Position 333a. Depth at buoy 6.4 fathoms.  
Lat. 57 14' 54.8" (1697 meters) N.  
Long. 135 33' 52.5" (800 meters) W.
- Neva Strait. Whitestone Narrows West Channel Buoy 2.  
(USCG Light List, 1948, Page 419. Red 2d-cl. gun.)  
Located 16 July 1948, Position 331a. Depth at buoy - 4.2 fathoms.  
Lat. 57 14' 52.8" (1631 meters) N.  
Long. 135 33' 48.5" (814 meters) W.
- Neva Strait. Whitestone Narrows Buoy 5.  
(USCG Light List, 1948, Page 420. Black, 2d-cl. can.)  
Located 16 July 1948, Position 332a. Depth at buoy - 8.0 fathoms.  
Lat. 57 14' 56.2" (1740 meters) N.  
Long. 135 33' 44.2" (742 meters) W.

Hova Strait. Whitestone Sand Spit Bury 2. ✓  
(USCG Light List, 1948, Page 120, Red, 2d-cl. Nm.)  
Lounded 16 July 1948, Position 157m. Depth at bury - 7.7 fathoms.  
Lat. 57 15' 00" (52.37 meters) N.  
Long. 135 33' 57.0" (95 meters) W.

This information has not been supplied to any other source.

Glendon E. Booths,  
Comdr., USCGCS,  
Comdg. USCGCS PATTON.

SHIP PATTON

P.O. Box 158, Sitka, Alaska.

14 August 1948.

To: The Director,  
U.S. Coast and Geodetic Survey,  
Washington 25, D.C.

Subject: Positions of Floating Aids to Navigation - Neva Strait, Alaska.

The buoys listed below were located at or near slack water by sextant <sup>n</sup> angles to signals located on triangulation stations. The launch was held alongside the buoy in each case. The locations were plotted on Boat Sheet PA-05348, and positions scaled and checked. Predicted tides were used for reduction of soundings. The datum is North American 1927-field computations. All data subject to Office verification. All buoys are on Chart 8281.

Neva Strait. Neva Strait Buoy 4. (USCG Light List, 1948. Page 420. Red, 2d cl. nun.)  
Located 10 August 1948. Position 185j. Depth at buoy - 4.8 fathoms.  
Lat. 57 15' 51.6"<sup>n</sup> (1595 meters) N.  
Long. 135 34' 48.5"<sup>w</sup> (813 meters) W.

Neva Strait. Wyvill Reef Lighted Buoy 6. (Fl.W.)  
(USCG Light List, 1948. No. 2399. Page 340.)  
Located 10 August 1948. Position 186j. Depth at buoy - 5.8 fathoms.  
Lat. 57 16' 19.4"<sup>n</sup> (599 meters) N.  
Long. 135 35' 22.0"<sup>w</sup> (368 meters) W.  
21.9

Neva Strait. Highwater Island Shoal Buoy 7.  
(USCG Light List, 1948, Page 420. Black, 2d cl. can.)  
Located 10 August 1948. Position 187j. Depth at buoy - 7.3 fathoms.  
Lat. 57 16' 52.5"<sup>n</sup> (1623 meters) N.  
Long. 135 36' 01.8"<sup>w</sup> (30 meters) W.

This information has not been supplied to any other source.

Glendon E. Boothe,  
Comdr. USC&GS,  
Comdg. USC&GSS PATTON.



SHIP PATTON

P.O. Box 158, Sitka, Alaska.

29 September 1948.

To: The Director,  
U.S. Coast and Geodetic Survey,  
Washington 25, D.C.

Subject: Positions of Floating Aids to Navigation - Olga and  
Neva Straits.

The buoys listed below were located at or near slack water by sextant angles to signals located on triangulation stations. The launch was held alongside the buoy in each case. The locations were plotted on Boat Sheets PA-05248 and PA-05348, and positions scaled and checked. Predicted tides were used for the reductions of soundings. The datum is North American 1927 - field computations. All data subject to Office verification. All buoys are located on Chart 8281.

Neva Strait. Whitestone Narrows Buoy 3. (USCG Light List, 1948, Page 419 - Black, 2d-cl. iron spar)  
Located 18 September 1948. Depth at buoy - 7.8 fathoms at MLLW.  
Lat. 57 14' 48.5" (1502 meters) N.  
Long. 135 33' 46.4" (776 meters) W.

This buoy was placed by the USCG Tender CITRUS and is some 14 meters into the old channel, which makes this turn very difficult for vessels of any size. The old buoy was either hit or rusted out as settled for well over a week before sinking, but is still visible about 1 foot at MLLW. It was not removed when the new buoy was placed. See my letter of 24 July 1948 for location of former buoy.

Shown  
O sunken  
buoy

Olga Strait. Middle Shoal Buoy 3 (USCG Light List, 1948, Page 419 - Black 2d-cl. can)  
Located 23 September 1948. Depth at buoy 5.4 fathoms at MLLW.  
Lat. 57 12' 25.3" (782 meters) N.  
Long. 135 29' 23.4" (392 meters) W. Not Applicable

This buoy was moved from its former position - see my letter of 17 July 1948 - by the USCG Tender CITRUS and placed in its charted position on Chart 8281. The buoy at present is in back of a large kelp patch and ships running from Buoy 1 to 3 would pass thru this kelp, and while not dangerous as to depth gives the operator a most unpleasant feeling as kelp is regarded as a danger sign. The writer not only made the survey of this area but

runs this channel twice a week, normally, and still this buoy being in its present position causes an unpleasant sensation when this kelp patch shows up on the course between the buoys. In your letter of 3 August 1948, 557 (1948) 83-bjm it was stated that this buoy would be left in its former position. As now located it causes a question as to whether or not it has been dragged out of position.

Glendon E. Booths,  
Comdr. USC&GS,  
Comdg. USC&GSS PATTON.

H 7675  
Pa 05348

TIDE NOTE

TYPE OF GAGE: STANDARD AUTOMATIC

LOCATION: SITKA, BARANOF ISLAND, S.E. ALASKA  
LAT. 57 02.9'; LONG. 135 20.3'

PLANE OF REFERENCE: MEAN LOWER LOW WATER

The gage was operated and maintained by personnel of the Sitka Magnetic Observatory. The hourly heights of the tide were furnished by the Washington Office.

H 7675  
Pa 05348

SE Alaska  
Neva Strait

List of geographic names  
penciled on smooth sheet.

Neva Strait

Part<sup>+</sup>shikof Island

Baranof Island

Entrance Island

Highwater Island

Columbine Rock

Whitestone Rock

Whitestone Narrows

Whitestone Point

Whitestone Cove

Wyrill Reef

Zeal Point

STATISTICS FOR HYDROGRAPHIC SURVEY H-7675 (PA-05348)

U. S. C. & G. S. S. PATTON - PROJECT CS-247

Date 1948	Day Letter	Vol. No.	Hand Lead & Wire Soundings	Positions	Statute Miles of Soundings
16 July	a	1 & 2	10	251	23.7
21 July	b	2	13	13	
22 July	c	2	17	22	
2 Aug.	d	2		62	4.1
3 Aug.	e	2 & 3		414	30.1
4 Aug.	f	3 & 4	12	158	10.3
5 Aug.	g	4	1	288	13.7
6 Aug.	h	4 & 5	20	219	13.7
10 Aug.	j	5 & 6	9	342	25.4
11 Aug.	k	6 & 7	129	217	5.8
12 Aug.	l	7	21	21	
Totals:			232	2007	126.8

Area: 1.16 square statute miles

GEOGRAPHIC NAMES

Survey No. H-7675

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List			
<u>Southeastern Alaska</u>										1	
<u>Neva Strait</u>										2	
<u>Baranof Island</u>									USGB	3	
<u>Partofshikof Island</u>									"	4	
<u>Whitestone Narrows</u>										5	
<u>Whitestone Point</u>										6	
<u>Whitestone Rock</u>				(bare: see chart 8281 for location)							7
<u>Whitestone Cove</u>										8	
<u>Columbine Rock</u>										9	
<u>Wyvill Reef</u>										10	
<u>Highwater Island</u>										11	
<u>Zeal Point</u>										12	
<u>Entrance Island</u>										13	
										14	
				Names underlined in red are approved. 8-16-50/ H. Heck							15
										16	
										17	
<u>Sitka</u>				(location of tide gage)						USGB	18
										19	
										20	
										21	
										22	
										23	
										24	
										25	
										26	
										27	

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-7675

Records accompanying survey:

Boat sheets <sup>1</sup>...; sounding vols. 7....; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls <sup>2</sup>envel.  
 special reports, etc. ....  
 .....

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

Number of positions on sheet		2007
		.....
Number of positions checked		70
		.....
Number of positions revised		18
		.....
Number of soundings revised (refers to depth only)		40
		.....
Number of soundings erroneously spaced		30
		.....
Number of signals erroneously plotted or transferred		0
		.....
Topographic details	Time	24
		.....
Junctions	Time	3
		.....
Verification of soundings from graphic record	Time	1
		.....

*Final*  
 Verification by *D.R. Ertle* *Prelim. verif. O. Svendsen 84 hrs. 4 Apr. '52* Total time *194* Date *10-12-55*

Reviewed by *J.A. Dinsmore* Time *40* Date *24 Febr. 1956*

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

Each Topographic and Graphic Control Sheet, and each Air Photographic Drawing should be accompanied by this form, completed so far as practicable, when forwarded to the Washington office.

*cancelled*

REGISTRY No. ~~7-7020a & 7-7020b~~  
Field No. ~~22-2-10 & 22-2-10~~  
Scale ~~1:6,000~~

State ~~Southwestern Alaska~~ General locality ~~Siberia Sound~~

Specific locality ~~near Alaska~~

Dates: Survey began ~~24 June 1948~~ Completed ~~26 July 1948~~

Photography \_\_\_\_\_, Supplemented by ground surveys to \_\_\_\_\_

Project No. ~~02-417~~ Instructions dated ~~5 August 1947~~

Vessel ~~Party~~ ~~SEARCH~~ Chief of party ~~Gordon E. Booth~~

Field work by ~~A. L. Marshall~~ Office work by ~~A. L. Marshall~~

Final inking by ~~Arthur L. Marshall~~

Ground elevations } in feet above { M. H. W.  
~~Pre-top elevations~~ } ~~or~~ }

Contours } by { Planetable } Interval \_\_\_\_\_ ft.  
Approximate contours } Multiplex }  
Form lines }

REMARKS *G. C. sheet destroyed as all useful information  
has been transferred to hydrographic survey H-7675 (1948)  
J. A. Winsmore*



DESCRIPTIVE REPORT TO ACCOMPANY  
TOPOGRAPHIC SHEETS T-7090a & b  
NEVA STRAIT, ALASKA  
SCALE 1:5,000

USC&GSS PATTON, GLENDON E. BOOTHE, CHIEF OF PARTY

AUTHORITY

This survey was made in accordance with Instructions of 5 August 1947. ✓

PURPOSE

The purpose of this survey is to locate signals for control of hydrography in Whitestone Narrows and Neva Strait, and for delineation of detail not clearly shown on the air photographs of the area. ✓

CONTROL

Second-order triangulation extended through Olga and Neva Straits in 1948 was used to control this survey. Some 1896 stations were recovered, remarked, and occupied in the 1948 scheme. ✓

SURVEY METHODS

The signals needed to complete the number required for control of hydrography were located by standard graphic control methods. No traverses were run. Intersections were good at all points. Rocks and reefs in Whitestone Narrows were not shown clearly on the air photographs, so were located on T-7090a by rod shots from plane-table ✓

set-ups on control points, at a time when low water was predicted. In addition to this, the low water line in the vicinity of station FLEET 1896-1948 was rodded in to provide a point of comparison with the detail shown on the air photographs.

SHORELINE

A short section of high water line was rodded in at each planetable set-up where it was practicable. Data for rocks awash were obtained by using the predicted heights of water at the time of estimation of the number of feet the rock was uncovered.

COMPARISON WITH PREVIOUS SURVEYS

This area is covered on Survey T-2304, done in 1897 on a scale of 1:20,000. Agreement between these two surveys is satisfactory except for the low water line in the vicinity of Highwater Island and in the vicinity of station FLEET 1896-1948. At Whitestone Narrows, additional rocks were located in the area indicated as foul by the larger reefs and kelp area on T-2304. Since the kelp areas are shown on the air photographs, they are not noted on this graphic control sheet.

GEOGRAPHIC NAMES

No new geographic names are recommended.

Approved and forwarded:

Submitted by

*Glendon E. Boothe*  
Glendon E. Boothe  
Comdr., USC&GS  
Cmdg., USC&GSS PATTON

*Arthur L. Wardwell*  
Arthur L. Wardwell  
Lieut. Comdr., USC&GS

*MAGNETIC VARIATION (scaled from G.C. sheet)*

<i>At</i>	<i>Δ BOTCH 2 1948</i>	<i>09:05</i>	<i>7-21-48</i>	<i>29°13' East</i>
<i>"</i>	<i>Δ GRIST 1896-48</i>	<i>15:33</i>	<i>7-15-48</i>	<i>28°32' "</i>
<i>"</i>	<i>Δ AIL 2 1948</i>	<i>11:00</i>	<i>6-25-48</i>	<i>29°08' "</i>
<i>"</i>	<i>Δ DINT 2 1948</i>	<i>16:40</i>	<i>7-22-48</i>	<i>29°40' "</i>

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7675

FIELD NO. PA-05348

S. E. Alaska, Neva Strait, Entrance Island to Whitestone  
Narrows

Project No. CS-247

Surveyed - July - August, 1948

Scale 1:5,000

Soundings:

Control:

808 Fathometer  
Hand lead

Sextant fixes on  
shore signals

Chief of Party - G. E. Boothe  
Surveyed by - G. E. Boothe and I. R. Rubottom  
Protracted by - C. R. Lehman  
Soundings plotted by - C. R. Lehman  
Verified and inked by - D. R. Engle  
Reviewed by - T. A. Dinsmore 24 Feb. 1956  
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline originates with reviewed air-photographic survey T-8484 of 1950. Rock and ledge detail shown in red has been retained from T-2249 of 1896.

The signals are from graphic control surveys PA-E and F-48 which are designated for destruction as all useful survey information has been transferred to the present-survey smooth sheet.

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.

Numerous offlying shoals, reefs and ledges are found in the area covered by this survey. Except where these conspicuous irregularities occur, the bottom is generally smooth. Minimum channel depths of 5 fms. occur in Whitestone Narrows where hazardous offlying rocks and reefs constrict the navigable channel.

4. Junctions with Contemporary Surveys

An adequate junction was effected with H-7676 (1948) on the north. On the south, depths on H-7674 (1948) and the present survey are in harmony. The transfer of junctional soundings on the south is deferred pending the complete verification of H-7674.

5. Comparison with Prior Surveysa. H-1626 (1884), 1:20,000

The  $2\frac{1}{2}$ -fm. sounding charted in lat.  $57^{\circ}16.87'$ , long.  $135^{\circ}36.08'$ , from H-1626 (1884) cannot be identified and verified in the records of that survey. A thorough development of the above locality, which included hand-lead investigation at low tide, revealed a least depth of 3.5 fms. on the present survey. In view of the reconnaissance nature of the early survey, the lack of adequate tide reducers and the intensive search on the present survey, it is recommended that the present  $3\frac{1}{2}$ -fm. sounding supersede the prior  $2\frac{1}{2}$  fms. for charting.

Except as noted above, this early reconnaissance survey shows only a few unimportant scattered soundings within the common area. The paucity of information does not afford a comparison of any cartographic value.

b. H-2287 (1896) and H-2288 (1896) 1:5,000

These prior surveys cover the area of the present survey. A comparison of the prior and present surveys indicates that no appreciable changes in the bottom have taken place. The present survey, however, obtained many shoal depths not revealed by the sparse development on the prior surveys. Radical differences in shoreline are noted in several localities. These differences are attributed principally to the paucity of shoreline control points on the prior surveys together with the sketching of shoreline between survey positions.

The following discrepancies are noted:

(1) The low-water shoal charted in lat.  $57^{\circ}14.55'$ , long.  $135^{\circ}33.97'$ , originates with two minus  $1/4$ -fm. soundings on H-2288. Closely spaced sounding lines on the present survey indicates smooth bottom depths of 3 - 4 fms. with no shoal indications. Investigation of the locality during periods of minus tide on the present survey also failed to reveal any rocks or shoal. The prior soundings are considered to be erroneous and should be disregarded.

(2) The  $5\frac{1}{2}$ -fm. sounding charted in lat.  $57^{\circ}17.48'$ , long.  $135^{\circ}36.30'$  from H-2288 should be disregarded. Falling in depths of 16 fms. on the present survey, the prior sounding is probably 10 fms. in error. Present development in the above locality is adequate to disprove the prior sounding.

The present survey is adequate to supersede the prior surveys within the common area.

6. Comparison with Chart 8281 (latest print date 7/25/55)

A. Hydrography

Charted hydrography originates principally with the previously discussed surveys which need no further consideration. Several rocks and critical soundings have been applied to the chart from the present survey prior to verification and review. No important discrepancies are noted in these additions.

The present survey entirely supersedes the charted information.

B. Aids to Navigation

The buoy charted in lat.  $57^{\circ}14.92'$ , long.  $135^{\circ}33.78'$ , was located on the present survey about 50 meters eastward of its charted position. The survey position appears to better serve the purpose intended.

Except as noted, the aids to navigation located on the present survey are in substantial agreement with the charted aids and adequately mark the features intended.

7. Condition of Survey

(a) The sounding records and Descriptive Report are complete and comprehensive. Numerous arithmetical errors in the reduction of soundings were found and corrected during verification.

(b) The smooth plotting was generally good. In some instances, the smooth plotter did not correctly space soundings at uneven time intervals which usually occurred at the beginning or end of a sounding line.

(c) The development of shoals together with drift sounding and use of the hand lead where necessary was exceptionally thorough on this survey. Coverage of the area for bottom characteristics was unusually complete.

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 required.

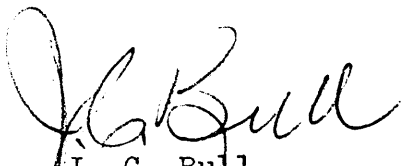
Examined and Approved:



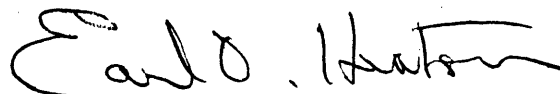
H. R. Edmonston  
Chief, Nautical Chart Branch



E. R. McCarthy  
Chief, Chart Division



J. C. Bull  
Chief, Hydrography Branch



Earl O. Heaton  
Chief, Division of Coastal Surveys

## TIDE NOTE FOR HYDROGRAPHIC SHEET

~~DIVISION OF HYDROGRAPHY AND TOPOGRAPHY~~

18 August 1950

Division of Charts: R. H. Carstens

Plane of reference approved in  
7 volumes of sounding records for

HYDROGRAPHIC SHEET 7675

Locality Neva Strait, Alaska

Chief of Party: G. E. Boothe in 1948  
Plane of reference is mean lower low water, reading  
5.0 ft. on tide staff at Sitka  
13.1 ft. below B. M. 8 (1924)

Height of mean high water above plane of reference is 9.1 feet.

Condition of records satisfactory except as noted below:

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

# NAUTICAL CHARTS BRANCH

SURVEY NO.     H-7675    

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
11/50	8281	Riegar	Before <del>After</del> Verification and Review <i>Partially Applied</i>
9 May 51	8252	Inest & Red	<i>Examined thru CP Drawing No 1 Oct 8281</i> Before <del>After</del> Verification and Review
MAR 59	8281	DR. Wittmann	<del>Before</del> After Verification and Review <i>Reconstruction</i>
8-19-60	8252	<i>Cap. M. Bogoy</i>	<del>Before</del> After Verification and Review <i>Completely appl thru 8281 Records</i> Before <del>After</del> Verification and Review
			Before <del>After</del> Verification and Review
			Before <del>After</del> Verification and Review
			Before <del>After</del> Verification and Review
			Before <del>After</del> Verification and Review
			Before <del>After</del> Verification and Review
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			Before <del>After</del> Verification and Review
			Before <del>After</del> Verification and Review
			Before <del>After</del> 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.