

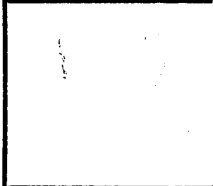
5389

U. S. COAST & GEODETIC SURVEY
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Ed. June, 1928
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. PATTON, Director



State: S. E. ALASKA

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } Sheet No. 6. 5389

LOCALITY

BOCA de QUADRA

19 33

CHIEF OF PARTY

JACK SENIOR

5389

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. 6

REGISTER NO.

State S. E. Alaska

General locality Boca de Quadra

Locality Quadra Point to Mink Bay

Scale 1:20,000 Date of survey SEPTEMBER 1923

Vessel U.S.C. & G.S.S. EXPLORER

Chief of Party JACK SENIOR

Surveyed by W. WEIDLICH

Protracted by W. WEIDLICH

Soundings penciled by W. WEIDLICH & F. S. BUTLER

Soundings in fathoms feet and fractions thereof.

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by J. M. Zeskind

Verified by J. S. Reed

Instructions dated MARCH 16 1923

Remarks:

Applied to drawing (compilation) of new chart No 8053-S.B.M. May 1935

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 6

BOCA de QUADRA

S. E. ALASKA

- 0 -

JACK SENIOR, CHIEF OF PARTY

SEASON OF 1933

945
GTZ
G1475

DESCRIPTIVE REPORT

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 6

BOCA de QUADRA - S. E. ALASKA

AUTHORITY:

The hydrography on this sheet was executed under instructions of the Director of the U. S. Coast and Geodetic Survey, dated March 16, 1933. ✓

SCALE:

1:20,000 and soundings are in fathoms and fractions thereof. ✓

LIMITS:

This survey covers the whole navigable area of Boca de Quadra as far as Marten Arm, connects and overlaps at the west limit with H. 5236 and at the southern shores with hydrographic sheet No. 7. ✓

METHODS:

The approved methods of the service were used throughout. ✓

All launch work was performed with good fixes and lines run north and south, generally on ranges, which will explain the lack of compass headings in the sounding volumes. ✓

The "Delta" was used for all the work and letter days are shown in red. The lines are spaced 200 meters apart in the main channel, about 100 meters in Badger Bay and from 30 to 50 meters in Weasel Cove. ✓

A ten pound hand lead was used in depths of less than 15 fathoms and in greater depths a steam sounding machine with an eighteen pound lead and stranded wire. All soundings are up and down. ✓

CONTROL:

Triangulation and topography in advance furnished the necessary control. ✓

TIDES:

An automatic portable tide gauge was in operation at the old cannery site about two miles east of Orcas Point and all tide reducers were taken from its records covering the period during which the soundings were taken. ✓

KELP:

This body of water is comparatively free of kelp, except where noted in the records and shown on the smooth sheet. ✓

CHARACTERISTICS OF SHORELINE AND BOTTOM:

The shoreline on this sheet is heavily wooded and in general abrupt and quite rocky, except at the heads of the inlets. ✓

The bottom in the main channel is uniform and muddy. Near the shores, rocky with occasional sand, and sandy at the heads of the inlets. ✓

The bottom in the vicinity of Kite Island is very irregular and rocky. ✓

RESULTS AND COMPARISON:

This survey revealed several shoals not charted before in the vicinity of Kite Island. Other depths were greatly reduced, but on two occasions this party failed to obtain similar soundings as shown on photo-stat of survey of 1892. ✓

The 15 fathoms spot about 1250 meters east of Orcas Point apparently does not exist. Soundings in this area are over 100 fathoms and shoaling gradually towards the shore.

This is 150 fms. in original sounding record. See # 6, 9, 10 of review.

The 9-3/4 fathoms spot, about 250 meters south of triangulation station JAGGED, does not exist. Numerous soundings were taken in this locality on several working days and the depths obtained do not give the slightest indication of a shoal.

This sounding is incorrectly plotted on sheet. See # 6, 9, 2 of review.

DANGERS AND OBSTRUCTIONS:

1. A shoal with a least depth found of 16 fathoms at M.L.L.W., lies about 520 meters, 256° from signal KIT. Positions 104 to 108 "n", red. Bottom is rocky. ✓

2. A shoal with a least depth found of 14 fathoms at M.L.L.W., lies about 290 meters, 264° from signal KIT. Position 100 "n", red. Bottom is rocky. ✓

3. A shoal with a least depth found of 4-2/6 fathoms at M.L.L.W., lies about 235 meters, 181° from signal KIT. Position 33 "l", red. Rocky bottom. No indication of any kelp. ✓

4. A shoal with a least depth found of 4-4/6 fathoms at M.L.L.W., lies about 210 meters, 155° from signal KIT. Position 75 "n", red. This position marks the west end of the shoal which extends for about 110 meters in a north-easterly direction. Rocky bottom, no indication of any kelp. ✓

5. A shoal with a least depth found of 21 fathoms at M.L.L.W., lies about 240 meters, 213° from triangulation station CEDAR. Positions 53 and 54 "n", red. Rocky bottom and very irregular. ✓

ANCHORAGES:

Weasel Cove offers excellent shelter and anchorage may be had in 16 to 18 fathoms of water, muddy bottom. The entrance to this cove is deep and clear. This anchorage was used by the EXPLORER, while working in this locality.

Badger Bay, about 3 miles deep and about 300 meters wide in the narrow passage, offers no shelter to vessels of moderate size on account of the great depths. Small vessels will find an anchorage at the head of the bay, near the flats which extend for about 600 meters from the tree line.

Respectfully submitted,

W. Weidlich

W. Weidlich,
Mate, C. & G. S.,
U.S.C. & G.S.S. EXPLORER.

Approved and forwarded,

Jack Senior

Jack Senior,
Commanding Officer,
U.S.C. & G.S.S. EXPLORER.

STATISTICS

TO ACCOMPANY HYDROGRAPHIC SHEET NO. 6

DATE	VOL.	DAY	BOAT	STAT.		SOUNDINGS		AREA	MILES TO & FROM WORK
				MILES	POS.	HAND	MACH		
9- 5-33	1	a	Delta	9.0	56	33	90		8.0
9- 6-33	1	b	"	13.9	79	105	134		0.7
9- 7-33	1	c	"	17.8	107	53	183		12.3
9- 8-33	1	d	"	12.4	116	133	135		2.1
9- 9-33	2	e	"	16.4	105	32	184		9.5
9-11-33	2	f	"	17.1	108	93	169		5.0
9-12-33	2	g	"	21.1	132	281	181		2.1
9-13-33	3	h	"	21.2	119	141	193		4.2
9-14-33	3	j	"	18.2	116	116	209		6.9
9-23-33	3	k	"	8.1	37	16	72		2.2
9-25-33	3&4	l	"	11.2	102	70	137		2.2
9-26-33	4	m	"	7.6	40	5	76		10.2
9-27-33	4	n	"	16.0	129	36	180		4.3
9-28-33	4	p	"	10.7	92	56	130		4.3
Total:				200.7	1338	1170	2073	17.5	74.0

200

February 26, 1934

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

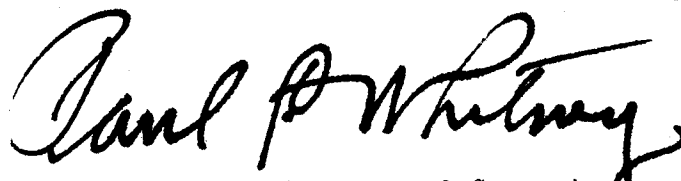
HYDROGRAPHIC SHEET 5389

Locality Quadra Point to Mink Bay, Boca de Quadra, Southeast Alaska

Chief of Party: Jack Senior in 1933
Plane of reference is mean lower low water reading
1.1 ft. on tide staff at Boca de Quadra
17.2 ft. below B. M. 1
5.6 ft. on tide staff at Kah Shakes Cove
15.8 ft. below B. M. 1

Height of mean higher high water above plane of reference is 14.9 ft.
at Boca de Quadra and 15.0 ft. at Kah Shakes Cove.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5289

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

Number of positions on sheet	.1338
Number of positions checked	..48
Number of positions revised	.None
Number of soundings recorded	.3243
Number of soundings revised15
Number of signals erroneously plotted or transferred5

Date:..... July 1934.....

Cartographer:..... J. M. Zeskind.....

Verification of protracting	} by Ladd	18 hrs. Time
Verification & inking of rocks and shoals		
Verification of inking by	J. M. Zeskind	40 hrs Time
Review by	J. G. Ladd	26 hrs Time

Verifiers Report on H5389

Chief of Party - Jack Senior
Surveyed by - W. Weidlich

Verified and stools checked by - John G. Ladd

1. The records conform to the requirements of the general instructions.
2. A number of topo. signals were found to be slightly in error. The following were [✓] the only ones corrected and the amount of the change was not considered sufficient to justify a replating of the positions involved.
○ Long, ○ Nus, ○ Ni, ○ ar, ○ Bra.
3. On the island "Kite" there is a Δ sta, and [✓] a topo. signal within 160 meters of each other. The topo. signal is named "Kit" and the Δ sta. is named "Kite". A better selection of names would have prevented any possible error in calling signals.
4. There is no reference Δ sta. indicated on [✓] the sheet.

5. a visual verification of the projecting has been made with the boat sheet and all apparent variations verified by projecting.
6. all shoals, danger spots etc. have been verified and inked.
7. A careful inspection of the topography has been made and all rocks, awash islands etc. have been checked ^{and made to agree} with the latest top. sheet. (T-4806.)

Comparison with T-4807
inspected by H. N. Murray
on Nov. 15, 1935 and found
satisfactory.

Respectfully submitted
John S. Ladd
assist. Capt. E. G.
April 30, 1934.

Field Record Section
Report on H-5389.

July 20, 1934.

The sounding records were neat, legible & complete. ✓

The fractions of depths conform to the hydrographic manual. ✓

The field drafting was well done. ✓

Shore characteristics were transferred from Topo sheets 4806 & 4807, having been left off by field party. ✓

No datum Δ was given by field party. Δ Ocean Louis Lighthouse is used. ✓

Respectfully submitted

W. J. Esler

Overlap at the western end of Poin de Quadra was not made with H5236 as this sheet was being used for the compiler.

The overlap has now been completed. W. J. E.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5389 (1933)

Quadra Point to Mink Bay, Boca De Quadra, S. E. Alaska.

Surveyed - Sept. 1933.

Instructions dated March 16, 1933 (EXPLORER); March 24, 1932
(EXPLORER).

Machine and Hand Lead Soundings - 3 Point Fixes on Shore Signals.

Chief of Party - Jack Senior.

Surveyed by - W. Weidlich.

Protracted by W. Weidlich.

Soundings penciled by - W. Weidlich; F. S. Butler.

Verified and inked by - J. G. Ladd; I. M. Zeskind.

1. Condition of Records.

The records conform to the requirements of the Hydrographic Manual with the following exceptions:

- a. No lead line comparisons were shown in the records. (par. 35 and 36).
- b. A list of the topo. and hydro. signals used was not included with the records. (par. 139).
- c. A reference triangulation station was not shown on the smooth sheet. (this has been accomplished by the office draftsman).
- d. The plotting of the topographic signals had not been checked. (Some have been checked by the office draftsman and the positions of five signals were corrected to agree with T. 4806).
- e. All of the topographic features outside of the high water line (rocks awash and reefs) had not been transferred from the topographic sheet to the smooth sheet. This likewise has been accomplished by the office draftsman.

2. Compliance with Instructions for the Project.

The survey satisfies the requirements of the Manual and the Instructions for the Project.

3. Sounding Line Crossings.

There are no cross lines on this survey. None were called for in the instructions.

4. Depth Curves.

The usual depth curves can be satisfactorily drawn.

5. Junctions with Contemporary Surveys.

- a. A satisfactory junction is made on the south at Vixen and Mink Bays, with H. 5384 (1933).
- b. On the west a satisfactory junction is made with H. 5236 (1932).

6. Comparison with Prior Surveys.

a. H. 2149 (1892).

In comparing this survey with the present survey it was found that with very few exceptions the soundings on H. 2149 (1892) taken on positions were in excellent agreement with the depths on H. 5389 (1933), whereas nearly all the soundings between positions on H. 2149 (1892) were in very poor agreement with the new survey H. 5389 (1933). In all cases the soundings on H. 2149 (1892) were much shoaler than those on the present survey. An examination of the sounding records for H. 2149 (1892) shows that no time of sounding was recorded for the intermediate soundings, but such notations as " $\frac{1}{2}m$ ", " $\frac{3}{4}m$ ", etc., were made, which according to a note on the front page of the first volume, were interpreted by the plotter to be the running time between soundings. The plotting on the sheet was done in accordance with such interpretation, but apparently the interpretation was incorrect.

The following items on H. 2149 (1892) require special mention:

1. The 15 fathom sounding (charted) about 1250 meters east of Orca Point (pos. 7 G green) falls in depths of 117 to 157 fathoms on the new survey (lat. $55^{\circ}07'.3$, long. $130^{\circ}49'.8$). An examination of the sounding records for H. 2149 (1892) shows this to be 150 fathoms and not 15 fathoms.
2. The $9\frac{3}{4}$ fathom sounding about one mile E by N of Porpoise Point (pos. 10 to 11 B, green) falls in depths of 40 to 50 fathoms on the new survey (lat. $55^{\circ}05'.9$, long. $130^{\circ}44'.9$). Additional hydrography was executed in this vicinity but no evidence of such shoal was found (see D. R. Page 2). This sounding is one of the intermediate soundings discussed previously and is undoubtedly plotted too far offshore. The next sounding of 35 fathoms on this same line falls in depths of 77 to 88 fathoms on the new survey.
3. The $4\frac{1}{8}$ fathom sounding (charted) in approximate lat. $55^{\circ}05'.4$ long. $130^{\circ}48'.7$ (pos. 37A green) falls in depths of 38 to 50 fathoms on the new survey. An examination of the sounding records shows that positions 37A and 39A were incorrectly lettered on the sheet, placing a $4\frac{1}{4}$ fathom sounding where a 34 fathom depth should have been shown.
4. The 14 fathom shoal west of Kife Island (charted) in lat. $55^{\circ}05'.2$, long. $130^{\circ}47'.5$ has been carried forward to the new survey in red. 16 fathoms was the least depth obtained on H. 5389 (1933).

b. H. 3790 (1915).

This is a wire drag survey and extends a short distance beyond the north of Boca De Quadra and overlaps the new survey about 2 miles. The effective drag depth was 48 feet and does not conflict with any depths obtained on the new survey.

c. T. 2117 (1892) and T. 3539 (1915).

A comparison was made between the rocks shown on these surveys and those shown on the present survey H. 5389 (1933) and where conflicts were found to exist they were disposed of in accordance with the principles laid down in "Instructions for Review of Hydrographic Surveys". It was deemed necessary to carry forward to the new survey several rocks awash. These are shown in red with an appropriate note added.

7. Comparison with Chart #8102 and #8075.

Except for matters discussed above there are no other rocks, shoals or other points of importance that need consideration in this review.

8. Field Plotting.

The field plotting was satisfactory.

9. Additional Field Work Recommended.

No additional field work is recommended.

10. Superseding Old Surveys.

Within the area covered, the present survey supersedes the following survey for charting purposes:

H. 2149 (1892) in part.

11. Note to Compiler.

Because of the numerous errors existing on H. 2149 (1892) both in the plotting of positions and the plotting of soundings, (see also review H. 5384 (1933) it should not be used for charting any area covered by modern surveys and should be used for areas not covered by such surveys only after a comparison has been made with the original sounding records. An appropriate note to this effect has been added to the original sheet.

12. Reviewed by - John G. Ladd - August 1934.

Inspected by - A. L. Shalowitz.

K. T. Adams
K. T. Adams,
Chief, Section of Field Records.

A. L. Shalowitz
Chief, Section of Field Work.

Examined and approved:

L. D. Colbert
Chief, Division of Charts.

J. G. Ladd
Chief, Division of H. & T.

Applied to drawing (compilation) of new Chart #8053

S.B.M. May 1935

25 Jan 27, 1936
L.H.J.