

5409

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

State: S. W. ALASKA

DESCRIPTIVE REPORT

Topographic }
Hydrographic } Sheet No. C-2133 5409

LOCALITY

DANGEROUS PASSAGE

PRINCE WILLIAM SOUND

19 33

CHIEF OF PARTY

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

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. C 2133

REGISTER NO. 5409

State S. W. Alaska

General locality Prince William Sound

Locality Dangerous Passage and The Pleiades Islands.

Scale 1:20,000 Date of survey Sept. 27 - Oct. 13, 1933

Vessel Launch # 3

Chief of Party A. M. Sobieralski

Surveyed by G. A. Nelson

Protracted by H. G. Conerly

Soundings penciled by H. G. Conerly

Soundings in fathoms feet

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by J. W. Day

Verified by J. W. Day + L. S. Stans

Instructions dated April, 15, 1933

Remarks:

U. S. GOVERNMENT PRINTING OFFICE: 1929

*applied to CM 8523 - Oct. 1934 - H. S. Gamber
8524 " " " " " "*

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET (Field No. C-2133), DANGEROUS PASSAGE.

Str. SURVEYOR, A. M. SOBIERALSKI, COMDG.

SEASON - 1933

Date of Instructions. April 15, 1933.

Area Covered. This sheet partly covers the southern half of Dangerous Passage and extends about one mile inside the entrance to Icy Bay. It also includes a resurvey of the Pleiades Islands.

Survey Methods. Standard 3-point sextant fixes were used throughout. Estimated distances offshore with a note referring to the boat sheet were used occasionally on the ends of lines where three objects were not available. Virtually all the depths were obtained with stranded wire and the regulation registering sheaves. These were checked at the beginning and at the end of the season. The lead lines used were checked from time to time in the field.

The work joins with Sheet (Field No. C-2233) and continues southward and eastward, the southern limit being due to the close of the field season.

Dangers. The discharge of ice from Icy Bay is continuous but irregular in volume. The flow is almost entirely to the southeast, passing south of Pleiades Islands when the discharge is heavy, and at such times blocking the entrance to Whale Bay. Only scattered pieces pass to the northeast and these for a short distance only. None were observed east of Split Island; the island lying in mid-channel east of Jackpot Bay.

A sunken rock, covered 1 foot at MLLW lies 1/4 mile west of the center of the Pleiades Islands, Position #41d, Vol. #1. A rock barging 4 feet at MLLW lies 150 yards 42 true from the northernmost of the group of wooded islets lying in the entrance to Chenega Village Cove, Pos. #76c, Vol. #1.

*Plotted as a rock at MLLW
L.S.S.
in accordance
with field
Records*

The southern shore of Chenega Island is ragged and should, in general, be given a berth of at least 1/4 mile.

Anchorage. The waters in this vicinity are of great depth and the shores generally steep to. For this reason anchorages are scarce.

Indifferent anchorages for moderate sized vessels may be had at the entrance to the cove just west of the southeast point of

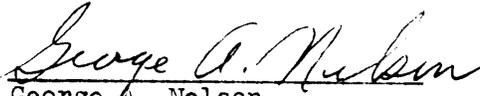
Chenega Island. Depths 18 - 20 fathoms, soft bottom. It is exposed to southerly weather.

Small vessels may anchor in the cove fronting Chenega ~~Village~~, 5 - 15 fathoms, soft bottom. It is only partly protected from the south by the entrance islets and is not recommended in southerly weather. To enter, pass 300 yards to the west of the entrance islets on a true 0 course until within 300 yards of the shore, then swing sharply to the right and head for the cross on the church, a white green-roofed structure. Anchor in suitable depth.

Comparison with previous surveys.

This sheet overlaps Reg. #3027, a reconnaissance survey of Knight Island Passage. The junctions with these soundings is satisfactory and supplement each other.

Respectfully submitted,



George A. Nelson,
Jr. H. & G. E.

Approved & Forwarded:



A. M. Sobieralski, H. & G. E.
Comdg., Str. SURVEYOR.

STATISTICS FOR SHEET (FIELD NO. C-2133).

Number of Volumes 3

Total No. of positions 830

Total No. of soundings . . .1712

Total miles of sounding
lines 141.6²

Area (Sq. statute miles) . . . 20.

STATISTICS

SHEET NO. C-2133

<u>Vol.</u>	<u>Day</u>	<u>Date</u>	<u>Positions</u>	<u>Soundings</u>	<u>Statute Miles</u>
1	a	9-27-33	66	156	9.0
1	b	9-28	96	244	14.7
1	c	9-29	86	197	12.6
1	d	10-2	108	222	13.7
2	d	10-2	10	19	1.5
2	e	10-4	110	233	22.5
2	f	10-6	143	267	26.7
2	g	10-10	106	196	16.5
3	h	10-12	<u>105</u>	<u>173</u>	<u>24.0</u>
		Total:	830	1,707	141.2

Lae

May 14, 1934

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 5409

Locality **Dangerous Passage and Pleiades Islands, Prince William
Sound, Alaska**

Chief of Party: **A. M. Sobieralski in 1933**

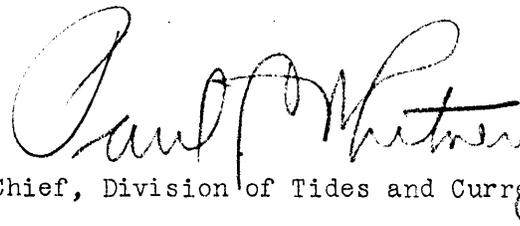
Plane of reference is **mean lower low water, reading**

5.5 ft. on tide staff at **Chenega Island**

14.2 ft. below B. M. 1

Height of mean higher high water above plane of reference is 11.5 ft

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5409.

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

Number of positions on sheet	...830
Number of positions checked	...20
Number of positions revised1
Number of soundings recorded	..1712
Number of soundings revised	...34
Number of signals erroneously plotted or transferred	...None

Date:.....

Cartographer:.....

Verification of pretracting by *L. S. Straw* Time: 12½

Verification of inking by *J. W. Day* Time: 61 hr.

Review by

John B. Reed Time: 20 hr.

Memorandum for Verification
and Review of H 5409 (C2133)
by Leo S. Straw.

1. Records

The records conform to the requirements of the General Instructions.

2. Drafting

A visual inspection of the plotting indicates that it was completed to the extent prescribed in the Hydrographic Manual. Minimum soundings on several shoals were verified and inked by the writer. The rock symbols were checked and minor corrections made.

3. Dangers

No dangers other than mentioned in the Descriptive Report were noted.

4. Discrepancies

The Smooth Sheet plotting at the southern limit of the work south of The Pleiades Islands does not agree exactly with the Boat Sheet plotting. Careful checking here verified the Smooth Sheet plotting. It is noticed that the use of weak fixes was unavoidable at some of the positions, and that the signals are easily confused when plotting. The least depth found on this shoal was $8\frac{1}{4}$ fathoms, between positions 80 and 81d. "Chenega", not "Chenega Village" is the correct name for the village Lat. $60^{\circ}-16.7'$ Long. $148^{\circ}-05'$ according to the Geographic Board.

5. Comparison with previous surveys

The eastern limits of this sheet (H 5409) overlap H 2916 (1907) and H 3027 (1909) ~~which are recent surveys~~. Due to the comparatively few soundings on the old sheets, a detailed comparison can not be made, however, there is satisfactory agreement at the junctions.

6. Comparison with Chart 8551.

Attention is called to the fact that the rock, covered 1 ft. at MLLW (plotted on H 5409 as a rock awash) is in the same position as the $\frac{1}{4}$ fathom sounding on Chart 8551. See page 1 of B.R. second paragraph.

A 30 fathom sounding $\frac{1}{2}$ mile south of the Pleiades Islands is shown on Chart 8551; A depth of $8\frac{1}{4}$ fathoms was found on this spot, and is plotted on H 5409. Since the greater part of the area covered by this sheet H 5409 is the first survey, no comparisons with the Chart 8551 can be made, other than those mentioned above.

Section of Field Records

Report on H-5409

Verified and inked by L. Straw and J. W. Day

- 1- The records conform to the requirements of the General Instructions.
- 2- The one, two, three, five and two hundred fathom curves were intermittently drawn. The ten and twenty fathom curves were completely drawn within the limits of the sheet.
- 3- The field plotting was completed to the extent prescribed in the General Instructions.
- 4- None of the field drafting was done over but several sections of the shore-line and low-water line were retouched where the inking was of insufficient clearness.
- 5- No junctions with adjacent sheets were made as the adjoining work was not verified as of this date.
- 6- The position 5a at approximately $\alpha 60^{\circ}-17.9$ $\lambda 148^{\circ}-09.6$ was re-plotted in accordance with the boat sheet. The value for the right angle of $27^{\circ}-40'$ as recorded in the sounding volume and as plotted on the smooth sheet seemed to be in error. The value for the right angle of $22^{\circ}-20'$ as picked from the boat sheet gave a more regular interval between the soundings and seemed better to correspond to the conditions on the ground.

One extra sounding was plotted between ^{each of} the positions as noted below. These soundings were removed and the lines were re-adjusted.

Positions 38e and 39e { $\phi 60^{\circ}-18.1$
 $\lambda 148^{\circ}-12.4$

Positions 66d and 67d { $\phi 60^{\circ}-14.5$
 $\lambda 148^{\circ}-00.9$

~~The locations are approximate.~~

The reviewer's attention is called to a sounding of 30 fathoms at position 61f at approximately $\phi 60^{\circ}-17.7$ $\lambda 148^{\circ}-09.8$. This sounding is very much shallower than the surrounding soundings.

A critical area occurs at positions 42g, 43g and 44g approximately $\phi 60^{\circ}-16.4$ $\lambda 148^{\circ}-05.5$. The positions were difficult to check due to the congestion existing.

Between position 36h and 37h at approximately $\phi 60^{\circ}-14.7$ $\lambda 148^{\circ}-11.3$ the time intervals were in error as plotted. The line was re-adjusted.

7- The field drafting in some instances was not very good. This reference is made mainly to the printing of topographic station names and soundings and to the shore line.

June 21, 1934

Respectfully submitted,

J. W. Day

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5409 (1933).

Dangerous Passage and The Pleiades Islands, Prince William
Sound, S. W. Alaska.

Instructions dated April 15, 1933 (SURVEYOR).

Machine Soundings and 3 Point Fixes on Shore Signals.

Chief of Party - A. M. Sobieralski.

Surveyed by - G. A. Nelson.

Protracted and soundings plotted by - H. G. Conerly.

Verified and inked by - L. S. Straw and J. W. Day.

1. Condition of Records.

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

No lead line comparisons were shown in the records.

2. Compliance with Instructions for the Project.

The survey satisfies the requirements of the instructions under which the work was done.

3. Sounding Line Crossings.

No cross lines were called for in the Instructions for the Project. With the exception of a few short cross lines to develop a shoal spot there are no sounding cross lines in this survey. These few however are satisfactory.

4. Depth Curves.

The depth curves are satisfactory. Of the inshore curves, the 20 fathom curve is the only one that can be drawn continuously. In a few cases the shoaler depths curves had to be broken on account of the insufficiency of the detail. In most cases, however, they were omitted because of the steep-to-character of the area.

5. Junctions with Contemporary Surveys.

The junctions with the contemporary surveys will be considered in the reviews of those sheets.

6. Comparison with Prior Surveys.

The only prior surveys within the area of the present survey are H. 2916 (surveyed in 1907) and H. 3027 (surveyed in 1909). These surveys will be considered together, since all soundings from H. 2916 (within the limits of the present survey) are transferred to H. 3027.

a. H. 2916 and H. 3027.

These surveys make a satisfactory junction with the new survey (as is required by par. 12 of the Instructions) and can be used to supplement the new survey wherever necessary. In the vicinity of the Pleiades Islands the present survey is in considerably greater detail and with the exception of two soundings (from H. 2916) that were thought best to carry forward to the new survey (indicated in red), the latter should supersede the former surveys for charting purposes.

The rock awash on H. 3027 (originating with T. 2970) off the southern islet of the Pleiades group plots about 30 meters to the southward of the group of awash rocks shown on the new survey. The latter is considered a more accurate representation and should therefore supersede the former determination.

7. Comparison with Chart No. 8515.

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

8. Field Plotting.

The field plotting was satisfactory with the exception that the shoreline was inked in with too fine a line.

9. Additional Field Work Recommended.

No additional field work is recommended.

10. Miscellaneous Matters.

The geographic names "Chenega Point" and "Dual Head" have been left in pencil on the new Hydro. survey pending their acceptance by the Geographic Board.

11. 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. 2916 - in part.

H. 3027 - in part.

12. Reviewed by - John G. Ladd, July 1934.

Inspected by - A. L. Shalowitz.

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

Examined and approved:
K. O. Robert
Chief, Division of Charts.

F. Borden
Chief, Section of Field Work.

G. H. Hude
Chief, Division of H. & T.

19 fathoms sounding in passage southwest of Verdant Id. should have been investigated by lines along channel.

