

3920

C. & G. SURVEY
L. & A.
FEB 3 1917
Acc. No.

Diag. Cht. No. R201-2

Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: *Alaska*
11-5813

DESCRIPTIVE REPORT.

Hydrographic No. 3920

LOCALITY:
Simovia Strait
South Coast
Alaska.

1916

CHIEF OF PARTY:
S. O. Colburn

3920

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. **3920**

State **Alaska, SE**

General locality **Zimovia Strait**

Locality **Vicinity of Young Roak**

Chief of party **L.O.Colbert**

Surveyed by **L.O.Colbert**

Date of survey **Aug 26 --- 28**

Scale **1/20,000**

Soundings in **Feet**

Plane of reference **Mean Lower Low Water**

Protracted by **N.P.W. nite**. Soundings in pencil by **N.P.W.**

Inked by **N.P.W.** Verified by
Lettered in pencil by A.J.

Records accompanying sheet (check those forwarded):

1 Des. report, _____ Tide books, _____ Marigrams, ²_____ Boat sheets,

¹_____ Sounding books, _____ Wire-drag books, _____ Photographs.

Data from other sources affecting sheet

Remarks: **A discrepancy will be found with the names of the signals as given on the smooth sheet and on the boat sheet. The names of the signals used are entered in the records to agree with the boat sheet which are incorrect, however a note in the descriptive report will explain this.**

U. S. G. SURVEY
U. S. G. S.
FEB 20 1917
Acc. No.

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY.

E. Lester Jones
Superintendent

DESCRIPTIVE REPORT

to accompany

WIRE DRAG SHEET No. 3920

of

ZIMOVIA STRAIT, SOUTHEAST ALASKA.

by

WIRE DRAG PARTY NO. 4.

L.O. Colbert, Chief of Party.

1916

Scale 1-20,000

DESCRIPTIVE REPORT
to accompany
WIRE DRAG SHEET No. 3920

Page 1.
L.O.C. 1916

ZIMOVIA STRAIT, SOUTHEAST ALASKA.

Limits of Sheet:

This drag survey covers an area in Zimovia Strait near the junction of the latter and Chichagef Pass; on the north it bounded by an approximate line from East Point, Werankofski Island, due east to Wrangell Island; on the south by an east and west line from the small island three-quarters of a mile ~~W.S.W. (true)~~ west, southwest (true) of East Point, to the most northeasterly point of Etelin Island.

Distance off shore:

Off East Point and along the coast of Etelin Island the drag was run from 100 to 300 meters off the shore, except where chartered sheals extending off shore made it necessary to give the latter a wider berth.

Chartered off lying islands and sunken rocks along the Wrangell Island side of this area made it necessary to keep well off this shore. When due east of Young Rock the drag was run about one-half mile off shore. However, off the bold point north of this rock, the drag went to within 300 meters of the shore. South of Young Rock, along the Wrangell Island shore, the drag dipped into the small indentations of the coast line to cover as much of that part of the Strait as practicable.

Currents and their effect on the drag.:

The position of Young Rock in relation to the deep water of Chichagef Pass explains the cause of the tide rips and swirls at this place. These made it difficult to control the drag and at the same time keep clear of the sheals near the shore.

There were no definite measurements taken of the drift or direction of the set of the currents in this locality during the season, and so far as observed while at work in this region, no discrepancy was found with the values and direction of the currents as given on chart 8200, issued June 6th., 1916. However, on one edition of chart 8160, the flood current was given as 0.75 knots, a typographical error which should read 0.75 knots.

Sheals:

(1) In Zimovia Strait opposite Chichagef Pass over Young Rock a least depth of 17 feet, at mean lower low water, was found. It is surrounded by depths of nine to twenty-two fathoms.

Note:- This ~~surrounding area~~ ^{depth} was reported to be 13 feet at mean lower low water on September 18, 1916. This was a mistake probably due to an error made at that time in applying the tidal reducer.

Note: A Spruce incorrectly plotted on 3920
This work replotted on H 3909

Shoals: Continued:-

The tidal reducer used on that day, August 26th. "B" day, was taken from the marigram predicting the tides for Wrangell. It is likely that a mistake was made in not using the correct day, and probably the reducer used was for the following day, August 27th, which would incorrectly reduce the sounding to about thirteen feet. The least depth carried over the rock was 16 feet. See ~~my~~ letter to the Superintendent, dated January 20, 1917.

(2) A sounding reduced to 58 feet, rocky bottom, was found 960 meters from Young Rock; the latter bearing 275° (true) from the position of this sounding. This likely marks the limit of the shoal as given on the latest edition of Chart No. 8200, which is about three-quarters of a mile east of Young Rock.

The drag went aground here, though the effective depth was supposed to be only 35 feet. However, the drag was drawing a much deeper depth due to an accident to the upright of one of the bouys, which broke loose. The weight without the support of the bouy, caused the ground wire to sag to a deeper depth, sufficiently to hook up, in spite of the strain of the towing launches.

(3) A sounding of 56 feet was found 360 meters from \triangle Beat, 2, the latter bearing 65° (true) from the position of the sounding.

The drag went aground at this position when drawing 55 feet, though it only touched bottom and then broke loose from same into deeper water. The bight of the drag sagged to a depth one foot deeper than that at the bouy.

(4) A rock awash at mean lower low water and not shown on the latest issue of chart 8200, was located about 0.6 mile north \triangle Stoke, which is on a small island lying off Wrangell Islands shoreline 2.3 miles, and bearing 160° (true) from Young Rock.

Probably same rock as marked H.W. A.L.S.

Adjoining sheets;

The northern limit of this sheet is overlapped by sheet Number (6) of the survey in the vicinity of Wrangell by Wire Drag Party No. 4 in 1916.

While no definite information is at hand, it is probable that the Wire Drag Survey of Party No. 3 overlapped this sheet at the entrance to Chickagof Pass. The work on this sheet was completed first and the limits given to Party No. 3 for that purpose.

Control of this Survey:

The signals used in making the survey were located by triangulation in 1916 by Assistant, U.C.G. Quilliam, Survey, Commanding, Steamer Patterson.

Signal "Spruce" was located by Wire Drag Party #4 in 1916 by cuts.

" Garden 2 as marked on the smooth sheet was called "Pine" in records and on the boat sheet. In a similar way ~~"Garden 2"~~ "Pass 2" was called Garden, and "Fo" was called "Pass".

Tide Reducers:

The tide reducers for this work were taken from the St Johns tide gauge marigrams corrected to agree with the Wrangell tides. The following relations were obtained by simultaneous comparison:-

H.W. at St John 1.4 feet lower and 14 minutes later than at Wrangell.
L.W. " " " same height " 17 " " " " " "

Concluding remarks:

This work was done when the party had only a poor supply of floats. These were wooden and badly waterlogged. With such floats there was a constant tendency for the drag to sag to a much greater depth than actually set. This trouble in one instance caused a split to be made in the work just west of \triangle Boat². The call for other work which was probably more important, prevented the party from returning to this locality to cover this split before the end of the season. When the work is carried on to the southward, this split could very conveniently be covered at that time. For limits of this ~~sheet~~ split see hydrographic smooth sheet,

The party while engaged in this work anchored off the town of Wrangell.

Statistics of Sheet 76

No Day	No Angles	No. Miles	No. retained soundings.
B	294	8.0	3
C	<u>197</u>	<u>10.2</u>	<u>1</u>
	491	18.2	4

Area 8 square miles (statute).

Approved

L. O. Colbert.

Assistant, C. & G. Survey.
Chief of Party.

Joachim

Assistant, C. & G. Survey.
Compiler.

Ed. J.

ADDRESS
U. S. COAST AND GEODETIC SURVEY
WASHINGTON, D. C.

REFER TO NO. 5-LAC

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

September 27, 1917.

Division of Hydrography and Topography:

Division of Charts:

Tidal reductions are revised in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 3920

Zimovia Strait, S. E. Alaska
L. O. Colbert, in 1916.

Plane of reference is
Mean lower low water, reading
Ft.
4.6 on staff at Wrangell
4.2 " " " *St. John Harbor

*Allowance made for difference in
the tide at the place of sounding.

L. P. Shidy

Acting Chief, Section of
Tides and Currents.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

June 4, 1923.

SECTION OF FIELD RECORDS

Report on Wire Drag Sheet No. 3909 - Additional
Work. (Originally registered as 3920)

Surveyed in 1916.

Chief of Party, L. O. Colbert.

Surveyed by L. O. Colbert.

Protracted and Inked by F. M. Albert.

Verified and Area and Depth Sheet by A. L. Shalowitz.

1. The depth and extent of dragging satisfy the specific instructions.
2. The least water was found on all shoals discovered. The 14' spot in the middle of Zimovia Strait where a 14' drag first grounded, is shown as cleared subsequently by another 14' drag. This can be explained as follows: When the first grounding took place, the drag may have sagged somewhat between buoys on account of the poor floats in use. (See Descriptive Report) At the second passing over when the 14' drag cleared the rock, that portion of the drag that was close to a buoy may have passed over it, hence there was no sag and the drag just scraped over the rock. Or another explanation would be that since a tidal change of a foot occurs just close to the shoal it may be that a lesser depth drag than 14' actually passed over the spot. The present charted depth of $2 \frac{3}{4}$ fathoms should be changed to $2 \frac{1}{4}$ fathoms to correspond to the changed tide reducer.

It is not certain whether the 22' drag passed over the $3 \frac{3}{4}$ fathom spot shown on Chart 8200 about 1 mile northeast of Young Rock. This spot was discovered on Wire Drag 3946. The limit of the drag plots too close to the sounding to say definitely one way or the other. Therefore the exact depth on this shoal is not known.

3. The overlaps are sufficient.
4. There are three splits on this sheet, two of considerable extent and one small one about one-half mile southwest of East Point. These should be dragged over whenever work is resumed in this locality. (See Descriptive Report). This sheet cannot therefore be considered as complete.

5. Owing to an erroneous plotting on the smooth sheet for 3920 of Δ Spruce, the entire sheet was replotted and the work shown on H. 3909. There were two rocks awash shown on 3920 about one-half mile north of Δ Stroke. The only record that could be found was for the westernmost rock. However, the easterly one was also transferred to 3909 as there was no way of disproving the existence of it. In transferring to 3909 consideration was taken of the fact that Δ Spruce which was erroneously plotted on 3920 was used in the location of the westernmost rock. Hence the easternmost rock was adjusted accordingly.
6. Reviewed by A. L. Shalowitz, June, 1923.