

3991

O. & G. SURVEY
L. & A.
NOV 23 1917
Acc. No.



Diag. Chy. No. 8201-2

Form 584
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: *Alaska*

DESCRIPTIVE REPORT.

Hydro Sheet No. *3991*

LOCALITY:

Fredrick Sound

1917

CHIEF OF PARTY:

D. J. ...

3991

Wire Drag Party No.3

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

Wire Drag Sheet No.1

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. **3991**

State **SE Alaska**

General locality . . . **Frederick Sound**

Locality **McDonald Island To Point 2 miles north Cape Str.**

Chief of party **A. Joachims**

Surveyed by **Wire Drag Party No.3**

Date of survey **May, 1917**

Scale **1/20,000**

Soundings in **Feet**

Plane of reference **Mean lower low water**

Protracted by **J.D.C.** Soundings in pencil by **W.D.P.**

Inked by **W.D.P.** Verified by

Records accompanying sheet (check those forwarded):

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

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

Data from other sources affecting sheet

Remarks:

**Records and descriptive report forwarded on separate
mail also boat sheet**

DEPARTMENT OF COMMERCE.

U. S. COAST AND GEODETIC SURVEY.

E. Lester Jones, Superintendant.

DESCRIPTIVE REPORT OF WIRE DRAG SHEET NO. (1.) 3991

FREDRICK SOUND, S. E. ALASKA.

VICINITY OF THE SUKOI ISLANDS.

SURVEYED BY WIRE DRAG PARTY NO. 3.

A. Joachims, Chief of Party.

Season of 1917.

Scale 1/20,000.

DESCRIPTIVE REPORT OF WIRE DRAG SHEET NO. (1.) 3991

Frederick Sound, S.E. Alaska.
Surveyed by Wire Drag Party No. 3.

Vicinity of the Sukoi Islands.
A. Joachims, Chief of Party.

Season of 1917.
Scale: 1/20,000

Limits of the Survey.

This survey is a wire drag examination of that area in Frederick Sound which is bounded on the north by the southern limits of sheet 2, at a line across the sound about 3 miles north of Cape of the Straits, on the east by the shore of the mainland, on the south by the northern limits of sheet C at a line across the sound thru MacDonald Islands, and on the west by the shoreline of Mitkof and Kupreanof Islands.

Control of the Sheet.

The control for this survey was made up of triangulation stations located by tertiary observations and also signals located by plane table surveys in this vicinity.

Effective Depth Dragged.

The greater portion of the area covered in the prescribed limits was dragged to an effective depth of 80 feet or over. However, certain portions required a shoaler hook-up as in the case of the 63 ft. shoal off Cape of the Straits where 57 ft. was the shoalest depth covered. Likewise a shoaler hook up was necessary in the vicinity of the Sukoi Islands and along the shore on either side of the sound.

Distance offshore.

In general the drag was run within 200 to 300 meters offshore dipping into the indentations of the shore as much as possible. This scheme was followed out very well along the Mitkof and Kupreanof Island shorelines. In the case of the Mainland side, the long flats extending out from the shore made it necessary to stand at a much greater distance offshore. In all cases constant sounding was carried on from aboard the inshore launch in order that the latter could get as close in as possible without going aground.

Shoals.

1. 63 feet at mean lower low water was found on a rocky shoal 2540 meters off Cape of the Strait, the latter bears 161 degrees true from this shoal.

The shoal was estimated to be about 200 meters in diameter dropping off into deep water.

57 feet effective depth was afterward carried over this shoal. My letter of June 4, 1917, reported this shoal.

Shoals.

2. About 250 meters off the southern end of the southernmost island of the Sukoi group, the drag went aground and 52 feet at mean lower low water was located here. Time did not permit a more extensive investigation and it is probably of no great importance being so close inshore and out of the regular channel.

3. About 1 mile south of triangulation station NEAR, 91 feet at mean lower low water was located. However an effective depth of 85 feet was carried over this point.

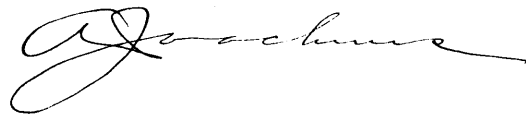
Conclusion.

"T" day of this sheet was not plotted as this was all on dead area covered later.

In accordance with instructions, only the area in Frederick Sound within the prescribed limits was covered, without going into the bays. The survey as completed is considered a complete investigation of this area. No splits or unfinished area remains.

STATISTICS of this sheet will be found on attached page.

Submitted by,



Chief of Wire Drag Party No. 3.

STATISTICS OF WIRE DRAG SHEET NO. (1.) 3991

DAY	NO. MILES LINEAR.	NO. ANGLES.	RETAINED SOUNDINGS.
A	5.2	180	
B	6.0	264	1
C	4.5	255	2
D	6.2	301	
E	4.3	219	
F	0.0	0	
G	1.7	138	
H	8.3	319	
J	6.1	323	
K	8.3	315	
L	9.3	367	
M	6.2	343	
N	9.0	397	
P	2.3	231	1
Q	3.0	168	
R	7.1	363	1
S	4.2	173	

Area in sq. miles 56.8.

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

REFER TO NO.

5-VEC

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

J.S.S.P.
HYDROGRAPHY ETC., (HT)

CHARTS (H) ←

LIBRARY

Place with descriptive report
of hydrographic sheet No. 3991
April 12, 1918

Division of Hydrography and Topography: *NCE*

Drawing Section. *4*

Division of Charts:

Tidal reductions have been approved in
4 volumes of Wire-Drag and Sounding records for

HYDROGRAPHIC SHEET 3991

Frederick Sound, Alaska
A. Joachims in 1917

Plane of reference is
Mean lower low water, reading

7.5 ft. on tide staff at Petersburg, Alaska.

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

December 27, 1921.

Verification of Hydrographic Sheet No. 3991.
By A. L. Shalowitz, Hydrographic and Topographic Draftsman.

From 26 B to 33 B (end launch) the positions were very poorly plotted. In many cases Δ KIT was used for the buoy angle instead of Δ LIT. As this change decreases the amount of overlap it was so shown on the smooth sheet.

On "B" day an error was made in numbering the end launch positions. 4 B was overlooked, so that every subsequent position was numbered one lower than it should have been. This also made the tide curves wrong. As changes of every 5 feet only are shown on the A and D sheet, no tide curves were changed on the smooth sheet except where it affects the A and D sheet.

At 33 B the bight of the drag as shown exceeds the actual length of the drag. As the 89 foot drag could not have possibly passed over the 63 foot spot the bight of the drag had to be shown as plotted even though it is greater than the actual length of the drag.

The plotting of "C" day did not exactly conform to the records, for between positions 19 and 22, the drag was tripped several times. The dragged area should therefore not have been made continuous, but should have ended at position 19 and begun again at 22. No changes, however, were made on the smooth sheet as this area was previously covered by a deeper drag.

Around 34 C (guide launch) in the vicinity of the 63 foot spot, the A and D sheet does not follow the smooth sheet for the bight of the drag at the end of the drag strip. This was done to be on the safe side and not show a drag depth of 85 feet too close to the 63 foot spot.

Between 27 and 33 C (end launch) the smooth sheet does not show the varying changes in depth due to tide changes. To show these would have complicated matters a bit, and as nothing would have been gained but to show a small area near the end launch as dragged to 85 feet instead of 80 feet, which is inconsequential, it was omitted.

On "L" day the records show that the bight of the drag at the beginning of the day was to the S.E. The plotting showed it to the S.W. As the chances were greater that it really was to the S.E., the change was made on the smooth sheet.

On "M" day it appears that the plotter used one section too few in drawing the bights of the drag. As no serious error is introduced, no changes were made in the curves.

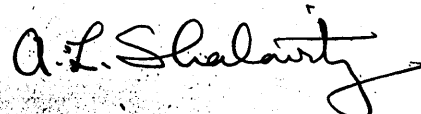
From 16 N to 24 N (End launch) the fixes are very weak. With careful plotting the path of the F buoy would be shifted nearer shoreward. But on account of the existing kelp in the vicinity of \odot WHITE, it was thought more advisable to accept the line as plotted, thus erring on the side of safety.

Positions 24 N and 36 N (end launch) were not plotted, and in numbering the positions no account was taken of this, so that the numbering fell two too short. This made it necessary to change all the tide curves from positions 24 N to 45 N. This mistake is inexcusable and shows very reckless work on the plotter's part, as he could have seen at a glance that his last end launch position did not correspond with the recorded position.

1 P to 11 P was omitted on the smooth sheet. This was assumed to mean that the strip was rejected as the area was subsequently covered.

Sounding 1-R was plotted as 56 feet instead of 62, the error being due to an erroneous reduction in the records.

There are various cases of insufficient overlap and 1 small split near the edge of the work. These are clearly indicated on the A and D sheet.



A. L. Shalowitz.

2. P. 2.

ADDRESS THE DIRECTOR
U.S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 9-DRM

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

SECTION OF FIELD RECORDS.

REPORT OF WIRE DRAG SHEET No. 3991

Surveyed in 1917

Chief of Party: A. Joachims

Surveyed by: A. Joachims, Instructions dated March 24, 1917.

Protracted and Inked by J. D. Chrichton and W. D. Patterson.

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 the shoals discovered.
3. The overlaps are sufficient except as shown on the Area and Depth sheet.
4. The area outlined on this sheet was well covered and as there were no important splits, no further dragging will be necessary in this locality.
5. The field plotting on this sheet was poor and careless.
6. Reviewed by A. L. Shalowitz, August, 1922.