3917

Diag. Cht. No. 8152-1, 8252-1 & 8201-2

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State Alaska

11—5013

DESCRIPTIVE REPORT.

Sheet No. 3917

LOCALITY:

Entrance to Summer Strait

1916

CHIEF OF PARTY:

L. O. Colbert

3917

Form 537
11—5812

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. 3917

State . S E Alaska . . . . . .

General locality . . Summer Straits . . . . . .

Locality . . . . Between Cape Decision and Pt St Albans . . .

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

Surveyed by . . L.O.Colbert . . . . . .

Date of survey . May 28 to June 16, 1916 . . . . . .

Scale . . . . . 1/20,000 . . . . . .

Soundings in . . Feet . . . . . .

Plane of reference . Mean Lower Low Water . . . . . .

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

Inked by . . . N.P.W. . . . Verified by . . . . . .
Letted in pencil by A.C.

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:

The channel north of Spanish Islands should be dragged. It is also recommended that whenever the dragging of the tributaries to the main channels is taken up, that the deep water area of Summer Strait be also dragged.

5. Reviewed by A. L. Shalowitx, August, 1922.

DEPARTMENT OF COMMERCE

COAST & GEODETIC SURVEY

E. Lester Jones
Superintendent.

Descriptive report

to Accompany

WIRE DRAG SHEET No. 3917

ENTRANCE TO SUMNER STRAIT,

SOUTH EAST 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.

Entrance to Sumner Straits, South East Alaska.

Limits of Sheet:

The drag work on this sheet covers an inshore strip along the western side of Sumner Strait from Point St. Albans to Cape Decision. The strip varies from 1000 to 4500 meters in width, and embraces the usual track of steamers bound from Chatham Straits to Sumner Straits via Cape Decision.

Depth Dragged:

Throughout the drag, with the exception of part of area covered on " C " day, ~~are~~ effective depths of 45 feet or over ~~was~~ were dragged. On " C " day, half of the drag, set out by the End Launch, carried an effective depth of 33 feet or over. This was due to a mistake of the Officer in charge of the End Launch, who made an error of ten feet in ~~the~~ setting ~~of~~ the uprights.

Distance offshore:

It was necessary to keep well offshore from [illegible] Point St Albans and the Fairway Island group on account of extensive reefs. The drag approached to within one and one-fourth miles of Point St. Albans.

Currents and their effect on the Drag:

A conservative estimate of the normal tide current over this area is 1.5 knots per hour. Off Point St. Albans very heavy tide rips were noticed. At one time while investigating a shoal, the flood current was noticed to run from west to east, and was estimated to be at 2.0 knots.

Near Fairway Island the tide flooded very strongly, about 1.75 knots, and in a Northeasterly direction.

Shoals:

(a) A pinnacle rock, with a least depth of 19.2 feet at mean lower low water, was found off Point St. Albans on the following bearings.

(1) △ Albans bears 3° (true), distant 1.6 nautical miles.

(2) South tangent of Fairway Island bears 250° (true).

The tide rips are very strong about this shoal, and the flood tide flows from west to east.

(3) Spanish Island bears 228° (true).

(4) Center of North Island bears 280° (true).

Shoals Continued:

(B) A pinnacle rock with a least depth of 46.5 feet was found south of Fairway Islands on the following bearings;

(1) East tangent Fairway Island bears 11° (true), distant 2100 meters.

(2) Spanish Island Light bears 218° (true).

Strong tide rips were encountered at this point.

The Pinnacle rises out of 13 fathoms.

Adjoining Sheets:

This drag survey is at the extreme western end of the working grounds, and is the farthest west of any drag survey in this vicinity. The survey is connected on the northeast end by sheet " O," which continues the survey over the main ship track.

Control of the Survey:

The signals used in making this survey were located in 1916, either by secondary triangulation or by plane table, The scale of the plotted sheet is 1 - 20,000.

Tide Reducers:

The tide reducers were taken from the tidal gauge stationed at Wrangell, but corrected so as to agree with the Cape Pole tides. The tides were missing on the Pole Anchorage gauge on the days when the dragging was done. By a simultaneous comparison, it was found that the Pole Anchorage low waters were 16 minutes earlier and 0.4 feet higher than Wrangell low waters. Also that Pole Anchorage low waters were 14 minutes earlier and 5.3 feet lower than Wrangell high waters.

Coast Pilot Notes:

The only Harbor within the limits of this sheet is Port Mc Arthur, which offers good protection from all winds by anchoring well in toward the head of the harbor. The Coast Pilot notes of this port are very complete.

Pole Anchorage was used by this party in Southeasterly weather, but is not recommended on account of a lack of swinging room and the effect of swells that enter at high water. It is useless in southwest winds.

Concluding remarks:- The survey in this vicinity was not completed. It was taken up in the early part of the season as soon as the weather conditions appeared favorable. However, engine trouble on one of the launches, and a spell of bad weather caused so much delay that it was not attempted to cover more than the usual steamer track.

The Statistics of the sheet are as follows:

Day	No. angles	No. miles (stat.)	No. retained Sound.
A	54	1	2
B	~~90~~	2.5	
C	269	8.5	1
D	205	10.7	
Total	1428	22.7	3

Total Area 18.5 Square Statute miles

Approved

L. O. Colbert

Assistant, C. & G. Survey.

Chief of Party.

A Joachims

Assistant, C. & G. Survey

Compiler

U.S.S.S.
HCS

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

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

October 15, 1917.

Division of Hydrography and Topography: W

Division of Charts:

LIBRARY

Place with descriptive report
of hydrographic sheet No. 3917
G.F.G.
Drawing Section.

Tidal reductions are approved in
2 volumes of Sounding records for

HYDROGRAPHIC SHEET 3917.

Summer Strait, Alaska
L.O.Colbert in 1916.

Plane of reference is
Mean lower low water, reading

4.4 ft.on tide staff at Pole Anchorage
8.3 " " " " " Craig.*

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

L. P. Shidy

Acting Chief, Section of
Tides and Currents.

Verification Report of Wire-Drag 3917.

The plotting of the drag work was well done no errors being found. The records were well kept.

The entire area was well dragged sufficient overlap being allowed in all cases.

The area where a sounding of 19 ft. was obtained position 9 "A" day should have been re-dragged to confirm this sounding as being the shoalest.

The area where the least sounding of 46 ft. was obtained when drag grounded at 4 "C" was not dragged. There is no surety that this is the shoalest water in this vicinity.

The system of numbering positions as followed on this sheet ~~is~~ when double control is used is a poor one and confusing when it is necessary to lay down Tide Errors. The end launch's position should agree with that of the guide launch when both positions are taken at the same time irrespective of what actual number of positions it is for the end launch. As it is, in this case the guide launch's number of positions greatly exceed that of the end launch and the result will be, e.g., 400 at the for buoy end of drag and 590 at the other end. The remedy is a ~~mere~~ matter of recording and only one system of numbering should be used.

Respectfully submitted,

Alois Ball,

Lieutenant

January 5, 1922.

E.P.E.

ADDRESS THE DIRECTOR
U. 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 on Wire Drag Sheet No. 3917.

Surveyed in 1916.

Chief of Party: L. O. Colbert.

Surveyed by: L. O. Colbert. Instructions dated Feb. 26, 1916.

Protracted and inked by: Field Party.

Verified and Area and Depth Sheet by: Alois Baer.

1. There is no mention made in the specific instructions as to the effective depth to which this area was to be dragged. As the area lies in deep water a minimum effective depth of 45 feet should have been maintained. Nevertheless, a narrow strip in the main channel was dragged, through an error, to an effective depth of 33 feet. (See descriptive report. Also note on page 10, volume 1 of the wire drag records.)

   The extent of dragging does not satisfy the specific instructions which call for the dragging of the passage between the north end of Spanish Island and the westerly approach to this passage. Further, near the northern limit of the sheet, a wider strip should have been dragged.

2. The least water was not found on the shoals discovered. Both the 46 and the 19 foot spots should have been re-dragged for possible shoaler water.

3. The overlaps are ample.

4. There are no splits within the limits of this sheet. However, additional work will be required to determine the shoalest water around the 19 foot and the 46 foot spots. The strip, dragged to 33 feet through an error, should be dragged to a deeper depth. The drag should be extended to include a wider strip just southeast of the 19 foot spot.