

3794

Diag. Cht. No. 8201-2

G. & G. SURVEY

L. & A.

NOV 11 1917

Acc. No.

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

State: _____

11-5613

DESCRIPTIVE REPORT.

Hyds. Sheet No. 3794

LOCALITY:

Clarence Street.

Pt. Harrington to Snow

Passage

1915

CHIEF OF PARTY:

John A. Daniels

3794

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. 3794

State S. E. Alaska

General locality Clarence Strait

Locality Snow Passage and Entrance to Stikine Strait

Chief of party John A. Daniels, Assistant

Surveyed by J. A. Daniels, E. W. Eickelberg, T. Jamison, H. R. Bartlett

Date of survey 1915, May 8 to Sept 14, 1916

Scale 1:20000

Soundings in Feet

Plane of reference Mean Lower Low Water

Protracted by W. H. K., C. A. E., V. A. E. Soundings in pencil by V. A. E.

Inked by W. H. K., C. A. E., V. A. E. Verified by N. R. B. for 1916 work.

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:

U. S. Coast and Geodetic Survey.

Register No. 3794.

STATE S. E. Alaska.

GENERAL LOCALITY Head of Clarence Strait.

Surveyed by Wire Drag Party No. 3.

Chief of Party John A. Daniels, Ass't.

Date July 19 -- October 9, 1915.

Scale 1/20000

SOUNDINGS IN FEET.

Plane of reference mean lower low water.

Protracted by W. H. Kearns

Soundings plotted by W. H. K.

Inked by W. H. K., P. F. Benedict.

Verified by _____

Depths from 10 to 19 feet shown	brown
20 to 29	green
30 to 39	blue
40 up	red

No descriptive report was prepared for this sheet. Mr. Daniels stated he would prepare one after the 1916 field work is completed.

E.P.B.

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SHEET NO. 3794.

GENERAL LOCALITY

SOUTHEAST ALASKA

SUB. LOCALITY

CLARENCE STRAIT

FROM POINT HARRINGTON TO SNOW PASSAGE AND STIKINE STRAIT

SURVEYED WITH THE WIRE DRAG UNDER INSTRUCTIONS FROM THE SUPERINTENDENT

DATED FEBRUARY 26, 1916.

SEASONS OF 1915 and 1916.

WIRE DRAG PARTY NO. THREE

JOHN A. DANIELS ASSISTANT? CHIEF OF PARTY.

The area covered by this work extends in Clarence Strait from the Point Harrington to the southernmost of the Kashevarof Islands northward including Snow Passage to a point about 1 mile northwestward from Snow Passage Lighthouse, and to a point in Stikine Strait abreast Steamer Point.

The clear portions were dragged to within about a quarter of a mile of shore except at the marked indentations near the Screen Islands to the eastward and to the Kashevarof Islands on the west where the main shoreline was not followed so closely on account of the outlying islands. None of Steamer Bay was dragged.

The signals used were located by secondary triangulation of this party in 1915, and were still in good condition for hydrographic use this season. A few signals in Snow Passage were located in 1915 by plane table and tertiary triangulation by this party and in 1916 by the party of the PATTERSON. List of signals is shown in Volume 1 of the Wire Drag Records.

A depth of fifty feet or more was verified when possible, and the strait was found to be generally clear. Shoals were located as follows; 21 foot rock about one half mile northwestward from Point Harrington; a large shoal area with a least depth of 33 feet about one mile east-southeastward from Point Nesbitt; numerous shoal soundings along the southern shore of Zarembo Island in Snow Passage. All dangers shown upon the sheet were located and reported during the 1915 season. The shoal water in Snow Passage is clearly marked by kelp at slack water, and the drag was taken very close to the kelp line. The middle portion of Snow Passage is clear of obstructions.

There is a small area left uncovered about one and one half miles south-southeastward of Point Nesbitt.

In the open areas the long drag was used, but in Snow Passage and along the shores of Zarembo Island and the Kashevarof Islands the short drag was necessary to facilitate the operations in shoal water and strong currents. Very strong tides were encountered around Point Nesbitt and in Snow Passage, the ebb amounting to from four to six knots in the narrower part of the latter.

In all cases not especially noted in the drag records one foot was taken off the length of upright for lift when this length was less than sixty feet and two feet when more than sixty feet.

The plotting of the work done in 1915 was by W. H. Kearns D. O. that of 1916 by C. A. Egner. Aid and V. A. Endersby D. O. Depth curves are entered to every foot up to 50 feet and for every 5 feet above that.

The shoreline of Zarembo Island was transferred from Sheet C. topography of this party in 1916 and that of the Kahsevarof Islands from topographic sheets of the party of the PATTERSON.

Respectfully Submitted

John A. Dussick
Assistant, C. & G. Survey.

Chief of Party.

Statistics for Hydrographic Sheet No. 3794.

Date 1915	Letter	Volume	W. D. positions	linear statute miles	drag length	retained soundings
July 19	a	1	36	5.0	2800	2
Sept 21	b	1	20	2.5	4000	15
22	c	1	44	8.5	4000	4
23	d	1	44	8.0	4800	1
29	e	1	18	3.0	2000	--
30	f	1	42	6.5	3600	2
Oct 2	g	1	39	3.0	2000	--
9	h	2	9	3.0	10000	--
<hr/>						
Totals			252	39.5		24

Total square statute miles 21.8.

Automatic tide gauge at Ketchikan.

VEC
March 24, 1916.

DFL

HYDROGRAPHIC SHEET 3794.

Clarence Strait, S.E. Alaska, by Assistant John A. Daniels
in 1915.

TIDES.

	Ketchikan ft.
Mean lower low water, or plane of reference on staff	1.4
Lowest tide observed " "	-2.9
Highest " " " "	21.5
Mean range of tide	13.1

Allowance was made for difference in tide at gauge
and place of sounding.

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

February 8, 1921.

Verification Report of Hyd. Sheet No. 3794.

This sheet was characterized by careless or indifferent plotting of the 1915 season work. And inasmuch as it was plotted by the field party much labor and confusion could have been saved the office if the officers who plotted the sheet had explained more fully the doubtful cases or added notes to clarify. Most of the criticism on this point would center about the shoal containing Mariposa Rock at the entrance to Steamer Bay.

On carefully analyzing the records and the plotting there appears a probability of the shoal as mentioned above extending north and beyond the position of the buoy as plotted by the field or as laid down on Chart No. 8164 apparently from bearings by the Lighthouse Service. The accompanying tracing of this immediate territory will aid in following the explanation. On "A" day at position 5 as recorded, the drag grounded, being then set at 47 ft. It is apparent that no sounding was obtained at this point at this time, or at least none is recorded. Two soundings were obtained however but further removed: sounding 1"A" of 37 ft. and 2"A" of 22.4. The latter is plotted and has been accepted as the Mariposa Rock. Later on the same day with the drag set at 20 ft. it grounded position 13"A" at buoy #3, a position very close to where it grounded at 5"A". It went aground this second time at 12:20 P.M. and a sounding is recorded but not plotted of 20.4 ft. having been obtained at 12:30. The drag "appeared to have floated over the shoal" at 12:40, which could be explained by the tide having risen one foot in the intervening time. The field party did not plot this sounding 3"A" "for lack of sufficient data" ignoring it without further question perhaps by believing it to be the same spot as the 22.4. These soundings are not likely to be on the same identical spot for they were taken an hour and a half apart as the record shows. And the time of aground at 13 A and the time of sounding 3 A agree very closely.

Now the plotting of the field party can not be strictly true. It is evident that with the drag set at 47 ft. 5 A, it could not have cleared a 42 ft. spot; thus the line of drag must have been somewhere north of this sounding and most likely formed itself into an angle instead of the normal smooth curve as shown. If buoy #3 is plotted, that is where the drag grounded at 13"A", the apex of the line of 5"A" could easily be placed on this point, (the buoy at which drag grounded, not recorded), then the total distance of the line would just equal the length of drag. And further the drag on C day set at 52 ft. could not have passed over 47. In fact at 1 C the drag did go aground, whence the sounding 47 ft. was obtained. The drag was then raised and cleared this spot and so raised passed over the former position of line of drag for 5 A and 13 A. Thus C day really begins a 2 C as is shown on boat sheet. The conclusion and contention is that

* Office adjustment of the shoreline enabled the plotting of this sounding. It is in practically the same position as the 22 ft. spot. E.P.E.

where the drag went aground at 5 A, 13 A and 1 C is probably the shoalest spot, 20.4 (20 ft) and if so should be considered the real position of the ~~rock~~ which is now plotted 180 meters further south or nearer inshore. The position of the buoy marking this rock is also in doubt. The field party never determined it accurately. The ~~sounding for~~ position 1 "E" which was to locate the buoy is very doubtful. The set of angles taken places it way too far south and the check angle taken to signal Bluff, $92^{\circ} 58'$ would not hold. The sum of the latter and the right angle would place it in a much better relative position but not where the chart shows it to be, being 80 meters south of the charted buoy or 110 meters inshore of where the shoalest depth may be.

Positions 1 B and 2 B were incorrectly plotted. 2 B had been plotted as 1 B and this latter had been plotted entirely wrong. The area covered as originally shown was shifted as a result to the south.

The drag went aground set at 55 ft. at N buoy position 44 C but no sounding shown at this spot. The nearest sounding is 300 meters distant. This area was later reswept at 29 ft.

Very indefinite descriptions were given to the many rocks forming Nesbit Reef on which numerous cuts were taken. They were in all cases allowed to remain in the positions as plotted by field party (See "F" day).

On "E" day position for Guide Launch was ^{omitted} at 5; pos. 14, 15, 16 were erroneously plotted and an uncalled for position was plotted between 14 and 15, apparently to force the plotting at the end of day. Position 17 was entirely omitted. Thus where the original plotting approached a split at 15 E and 30 F the corrected work proves sufficient overlap.

Plotting of a somewhat similar nature as the above occurs on "H" day. Position 10 which is the last for the day did not appear as plotted at all. Whereas the position shown for End Launch for position 9 was really that for 10; position of End Launch for 9 and that for Guide Launch position 10 had been omitted. That is the "N" buoy for 10 and "F" buoy for 9 had been considered as the ^{stretch} ~~stretch~~ of drag for position 9.

The 38 ft. sounding 150 meters off of "F" buoy, 37 F, where drag went aground is assumed to be the shoalest for this spot since none is recorded to plot at the buoy. This 38 was net reswept at a lesser depth. It lies at the entrance of Ossippe Channel, between Bush and Shrubby Islands. The 34 ft. set of drag from 38 to 42 F swept 350 meters to the east of it.

On "E" day, 1916 work the drag went aground at position 20. Though the

*Location of
sounding?*

effective depth was 48 ft. the least depth obtained was 52. The chart however shows this as 8 fathoms.

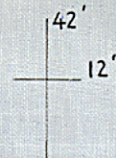
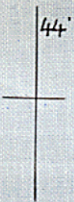
All of the 1916 season work was recorded and plotted in good shape.

Respectfully submitted.

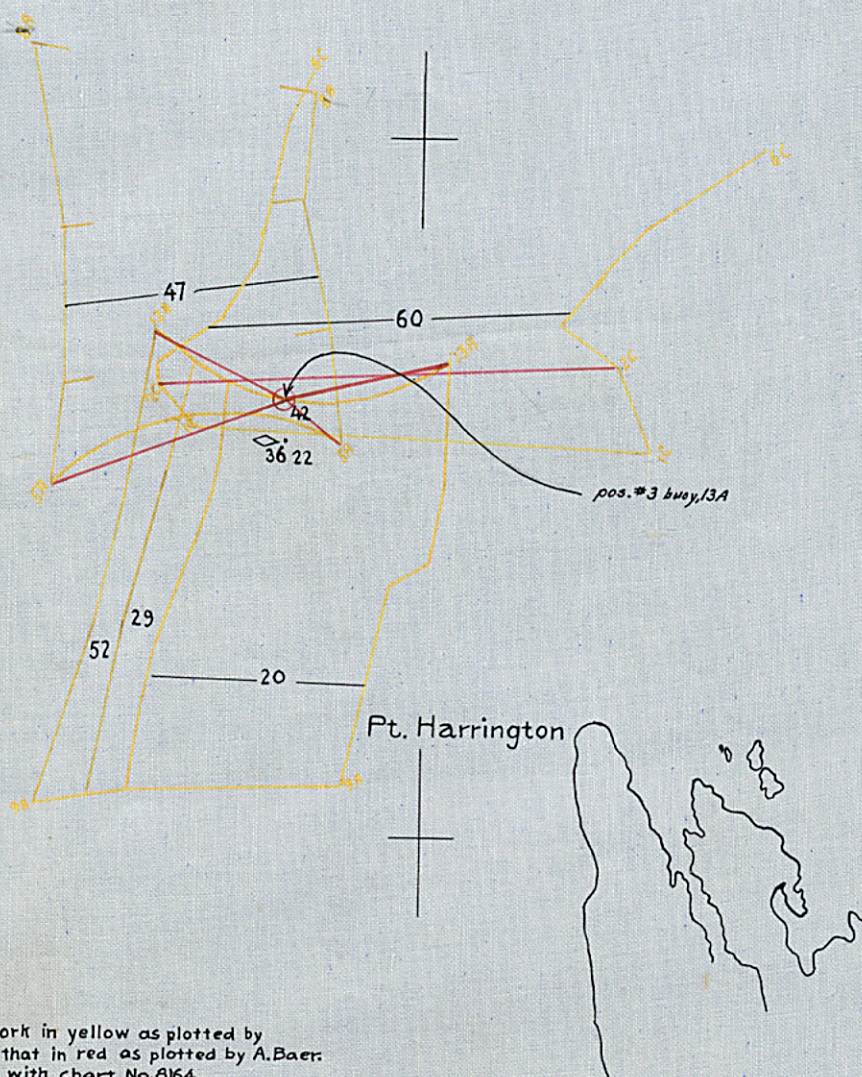
Alois Ball

Draftsman.

12'



To Accompany Verification Report Hyd.3794



56°10'

Pt. Harrington

56°10'

All the work in yellow as plotted by field party; that in red as plotted by A. Baer. Compared with chart No. 8164

44'

42'

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

SECTION OF FIELD RECORDS.

REPORT ON WIRE DRAG SHEET No. 3794.

Surveyed in 1915-1916.

Chief of Party: J. A. Daniels.

Surveyed by J. A. Daniels, W. H. Kearns, C. A. Egner and V. A. Endersby.

Plotted by W. H. Kearns, C. A. Egner and V. A. Endersby.

Verified and area and depth sheet by A. Baer.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of the work fulfill the requirements of the General Instructions.
3. The plan and extent of the work satisfy the specific instructions.
4. The field plotting was completed to the extent prescribed in General Instructions.
5. The plotting by W. H. Kearns of the work done in 1915 was defective and required considerable time by the office draftsman to correct discrepancies.
6. The junctions with adjoining drag sheets are satisfactory and the only split of any consequence is the small one near the 52 foot spot northwest of Bluff Island.
7. When opportunity offers Steamer Bay and the bight to northward should be dragged. Also there is a clear strip about 800 meters wide facing Kashwarof Island that was not dragged. The important area $\frac{1}{2}$ mile by $\frac{1}{3}$ mile in extent, in which Mariposa Rock is located, was dragged to 20 feet only.
Difficulty was encountered in plotting several rocks owing to defective shoreline, that at Steamer Point being 200 meters in error. To correct this the eastern side of Stikine Strait from Pt. Harrington to Chichagof Pass should be surveyed.
8. The surveying done in 1915 was good and the field drafting was fair. Both the surveying and field drafting done in 1916 were excellent.
9. Reviewed by E. P. Ellis in November, 1921.