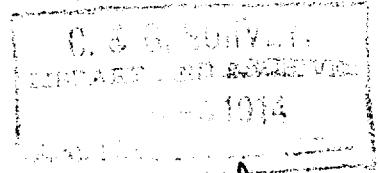




3688



Add - work on Reft. filed under
Diag. Cht. No. 8102-2

3686

JBW

JUN 8 1927

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

O. S. Totten
Superintendent.

State: *Alaska*

DESCRIPTIVE REPORT.

Hydrographic *Hyd.* Sheet No. **3688**

LOCALITY:

Tongass Narrows
Ketchikan to
Guard Island

1914

CHIEF OF PARTY:

J. A. Daniels

11-4645

3688

WIRE DRAG SURVEY 3688

Tongass Narrows

S. E. ALASKA

Guard Island to Ketchikan

July 22-Sept. 19,

1914.

Scale $\frac{1}{15,000}$

John A. Daniels, Aid.-Chief of Party.

Officers:

R. V. Miller, Aid, in charge of Launch Arnold, observing and plotting, in charge of triangulation.
Thos. Jamieson, Mate; Observing $\frac{1}{2}$ and plotting on G. L. CHEHALIS.
L. C. Dyke, D. O. In charge of End Launch VIKING.
W. H. Kearns, D. O. Observing $\frac{1}{2}$ on G. L.
G. C. Jones, D. O. Observing $\frac{1}{4}$ and assisting in triangulation.
Lindley Davis, Mate; Assistant observer and coxswain CHEHALIS.

J. A. Talbot, Jr. } Recorders
J. C. Johnson, }

DESCRIPTIVE REPORT

Hydrographic Sheet #1. 3688

The area dragged on this sheet includes all of Tongass Narrows from Guard Island Light to Ketchikan, together with a careful examination of Ward Cove Anchorage. The Principle uncharted shoals found are described below.

A 7' shoal 650m 50° true from Vallenar Pt. and 500m. off shore. The shoal is outside the 10fm. curve and near a charted 25fm. spot. The shoal extends in a northwesterly direction, and a $33\frac{1}{2}'$ sounding was obtained 540m. 20° true from Vallenar Pt. about 30m. outside the 10fm. curve.

A shoal having a least sounding of 38' was found 210m. 75° true from Rosa Reef Spindle. This shoal is 50m. outside the 10fm. curve.

In Ward Cove a considerable shoal area was found upon which the following soundings were obtained:

$32\frac{1}{2}'$ 160m. 50° true from buoy and near 10 fm. curve;
29' 50m. 105° true from buoy, on the 10fm. curve and in fairway between buoy and glue factory dock;
9' 50m. 30° true from buoy, on 10 fm. curve.

Recorded 20' —
See Sdg Book
Vo.

A 19' shoal was found 230m. from north shoreline and 1380m. 140° true from beacon on Peninsula Pt.

Sheet #1 (conc.)

A 21' sounding was found 330m. ^{true East} from shore and just south of the abandoned village on the south shore. It is $1\frac{1}{4}$ miles ~~331°~~ true from white beacon off Peninsula Point.

Probably
151°
J.B.S.

Soundings were taken along the south shoreline beginning 1020m. to the westward of East Clump Light, and extending 940m. to the West, showing that the 10fm. curve extends well out into the channel along this section. The soundings were from 29' to 40' and were made at distances of 30m. to 60m. from the shore.

A clear channel of depth of 45' or more was found to exist across the entire area in the regular track of the deep draft vessels.

3688

STATISTICS

Tongass Narrows, S. E. Alaska.

Hydrographic Sheet #1

Wire Drag Party, 1914.

John A. Daniels, Chief of Party.

Date 1914	Day	Miles of drag line	Angles	Soundings
July 22	A	2.50	96	0
" 24	B	4.75	198	1
" 25	C	8.00	264	3
" 27	D	3.00	150	3
" 28	E	4.00	216	0
" 29	F	0.00	00	2
Aug. 1	G	4.50	198	7
" 3	H	6.00	204	1
" 7	J	5.50	264	2
" 8	K	1.75	114	3
" 21	L	2.00	228	2
" 22	M	2.75	150	1
" 24	N	2.50	168	7
" 25	O	1.50	168	5
Sept. 19	P	<u>1.00</u>	<u>84</u>	<u>3</u>
		49.75	2,502	40

List of Plane Table Positions

3688

Tongass Narrows and Ward Cove

Hydrographic Sheet #1

Wire Drag Party, 1914

John A. Daniels, Chief of Party.

Object	Lat.	D. M. (meters)	Long.	D. M. (meters)
Be	55 21	415	131 41	505
W. Cable New Boathouse	(1440)	(1440)		(551)
Tile Chimney on Whaling Sta.	55 21	1125 (730)	131 42	311 (746)
Cliff Steep Cliff, Ward Cove.	55 23	1342 (513)	131 43	103 (951)
Can Stack, Cannery.	55 23	1475 (380)	131 43	793 (261)
Glue Glue Factory Stack.	55 24	280 (1575)	131 43	252 (804)
Jam Small Old Bldg.	55 24	694 (1161)	131 43	133 (923)
Tal Small Old Bldg.	55 24	602 (1253)	131 43	849 (207)
Jay J-shaped Scar on Cliff	55 24	22 (1833)	131 44	105 (951)

△ⁿ point →

VEC
Feb. 17, 1915
L. P. S.

HYDROGRAPHIC SHEET 3688.

Tongass Narrows, Alaska, by Assistant John A. Daniels
in 1914.

TIDES.

	Wards Cove ft.	Ketchikan ft.
Mean lower low water, or plane of reference on staff	0.5	1.3
Lowest tide observed " "	-3.6	-2.9
Highest " " " "	20.2	21.5
Mean range of tide	13.8	13.1

EXAMINATION OF HYDROGRAPHIC SHEETS
Sections by the
~~DIVISIONS~~ OF FIELD WORK AND FIELD RECORDS.

Sheet No. 3688 *WD*

1. + Are numbers of hydrographic sheets adjoining limits of work shown? *no*
2. Are transferred soundings of adjacent hydrographic sheets made to show that ground has been covered?
3. + Is sheet of proper size? *yes*
4. + Is sheet well laid out, no additions required? *yes*
5. Are limits of hydrography regular?
6. + Are positions of signals accentuated by light dot of black ink to assist plotting? *no*
7. + Are tidal stations plotted on sheet? *No location is stated*
8. Is area of work completely covered?
9. Are critical soundings and dangers shown distinctly?
10. + Is the control good? *yes*
11. + Are positions of signals clearly shown? *yes*
12. Are soundings well distributed?
13. Are shoals carefully and sufficiently developed?
14. Do soundings cross satisfactorily?

- 15. Is existence or non-existence of a reported shoal determined?
.....
- 16. Is least sounding over bar probably determined by check soundings or diagonal sounding lines crossing same?
- 17.+ Are projection and plotting checked? *yes*
- 18. Is the scale of this sheet sufficient to show the necessary details in the navigable channels?
- 19. +Is the shoreline shown? *yes*
- 20.+ Is there an accompanying list of plane table or sextant positions of signals? *not with sheet*
- 21. Has sufficient attention been given to the development of channel?
- 22. Are sufficient bottom characteristics shown?
- 23. Are sounding lines normal to coast?
- 24. Have suspicious soundings been investigated?
- 25. Are ranges or bearings given for important shoals?
- 26.. Are sailing directions given?

27. Is the general hydrography in the entire area properly developed?
28. Are shallow channels for motor boats sounded?
29. Is there a note as to coloration of water in or near mouths of rivers and bays?
30. Is there any information given as to obtaining fresh water? ..
31. Are there proper intervals between soundings?
32. Are projecting points of land and reefs determined by sufficient lines with soundings at close intervals run at right angle to direction of points?
33. Is there sufficient data to draw depth curves?
34. Are shoal areas remote from shore properly developed by independent system of buoy signals placed in the vicinity of shoal?
35. Are soundings obtained at docks in harbor?
36. *Is there a full list of data effecting sheet given?
37. Are description of hydrographic signals and marking of same recorded?
38. Is there a list of land marks given?

- 39. + Does descriptive report give date of instructions? *Yes*
-
- 40. Are small islets and rocks distinctly shown?
- 41. Is information relative to anchorage given?
- 42. + Are survey methods explained sufficiently? *Yes*
- 43. Are geographical names given on sheet?
- 44. Are coast pilot notes given?
- 45. Is the unit of soundings given in title?
- 46. Are sufficient depth curves shown?
- 47. Are aids to navigation shown?
- 48. Are grass or kelp indications shown?
- 49. Are sailing courses shown on sheet?
- 50. Is descriptive note given as to visibility of shoals?
-
- 51. Are dangers fully described in descriptive report?
-
- 52. Is the character of reefs described on sheet?
-
- 53. Are beaches indicated where vessels in distress could be safely beached?
- 54. Are standard symbols used in drafting?
- 55. Is information relative to currents given?
- 56. Is there a statement as to certainty or probability of least depth over dangers given?
- 57. Is the existence of certain shoals doubtful?
- 58. Is a general description of coast given?

59. Is information relative to commercial importance given?
60. Does the descriptive report cover one or a moderate number of sheets?
61. Are descriptions of headlands given?
62. Is the nature of shoals whether coral rock or sand shown on sheet?
- 63.+ Is the position of the tide gauge well selected? Is the tidal data sufficient for the reduction of soundings over the area of the sheet? *yes*
- 64.+ Have projection lines been numbered around all the edges? ...
- 65.+ Has the geographic position of one of the triangulation points on the sheet been inked near the bottom edge of the sheet? *yes*
66. Was the speed of the sounding boat such as to allow vertical readings of the leadline?
67. Were lines of soundings run along the axis of narrow channels?
68. Have rocks or shoals seen from the sounding boat in passing been definitely located?
69. Have charted shoals reefs, or rocks been investigated?
- 70.+ Have sounding records been kept in approved form? *yes*

- 71. Are Wire drag surveys required?
- 72. Is the area between the soundings taken and the shore indicated or described as being covered by reefs, etc. as the case may be?

Other Remarks

.....

.....

The forgoing points marked by a cross (+) and the following additional points are to be considered for wire drag hydrographic sheets.

- 73. What additional areas, if any, in the locality covered by the sheet should be dragged? *will covered*
- 74. Number of small areas inside limits of work missed by drag (few, moderate number, numerous) *Few*
- 75. Are shoals discovered with drag clearly shown? *yes*
- 76. Were shoals later covered by drag set at suitable depth? *no as far as practicable*
- 77. Are all areas missed by drag clearly shown? *yes*
- 78. Are overlaps ample? *yes*
- 79. Do effective depths conform to instructions under which the work was done?
- 80. If work was done before present practice as regards effective depths was adopted, should the area be re-dragged to conform to the present practice? *Sufficient for surface navigation*
- 81. Are all shoals discovered shown on current issue of chart?

J.H.H.

Myd @ 3688.

The area dragged as shown on this sheet extends from Guard Island Light to Ketchikan, including Ward Cove Anchorage.

The area was practically covered by the drag, although a few spots were missed and are indicated on the tracing by arrows.

The work was plotted in the field and verified in the office. A tracing was then made indicating clearly the areas dragged and their respective max. eff. depth.

A number of inaccuracies in plotting were found and corrected. In this connection the following might be mentioned.

At $\frac{1}{2}B$, where the line begins, a 48' drag passed a 42' spot. This 42' sounding falls within the area covered by the light, furnished by the drag, and by assuming and plotting the drag in a straight line the 42' sounding falls on the right side of the drag.

At $\frac{1}{2}C + \frac{27}{2}E$, where the lines begin, the lights of the drag are plotted in the direction of the pull. There was no reversal of the lines, and therefore, the positions of the lights, assuming the plotting to be correct, might be attributed to a strong current. A short note in the record to this effect

would be of great help in plotting and verifying.

At $\checkmark d$ "Line ends". The line was plotted and joined to $\checkmark d$, as if no interruption took place.

Positions $\checkmark g$, $\checkmark c$, $\checkmark k$, and $\checkmark N$ plotted wrong.

At $\checkmark L$ a 40' drag passed a 38' spot (?)

At $\checkmark o$ "N" set at 35' and "I to F" at 29'. The ~~setting~~ raising of "I" effects section "N" to "I" and the entire drag should have been regarded and plotted as if set at 29'.

The 9th sounding at "2N" seems to have been gone over by a 26th drag. The split in the vicinity of the sounding was intentionally increased to take in this doubtful area.

Shoals and dangers to navigation are fully described in the report of the chief of the party, letters: 264, 320, 339, and 377 for 1914 & letter 37 of 1915.

The work was very well executed and records kept in good shape.

J. B. Shklean

April 16 - 1915

On comparing this work with Hyd^o 3046 it will be found that two 24th soundings were located on #3046, where this work shows 29th (