

83
SHA
1913

3527

C. & G. SURVEY,
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Diagram No. 1203-2

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

O. H. Tittmann

Superintendent.

State: *Maine*

DESCRIPTIVE REPORT.

Hyd. Sheet No. ~~76~~

3527.

LOCALITY: *

Approach to Penobscot

Bay

Matinicus Island

to Seal Island

1913

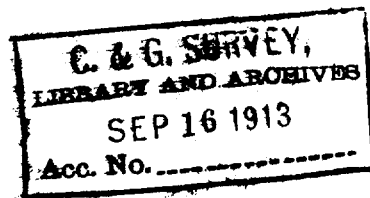
CHIEF OF PARTY:

N. H. Heck, Asst.

11-4645

3527

3527



Hyd. Sheet ~~16~~ 3527.
MAINE

South Approach- Penobscot Bay

Matinicus Island Ledges
to

Seal Island Island
WIRE DRAG SURVEY

Chief of Party-N. H. Heck, Assistant

July 8 to August 22

1913
Scale 1/20 000

Tides
Matinicus Harbor

Highest tide observed staff	11.5
Lowest " " "	- 0.3
Mean Low Water on staff	1.5

The area dragged upon this sheet includes that part of the approach to Penobscot bay between Matinicus Island and Seal Island north of Wooden Ball Island. The area is bounded upon the north by the dragged area of Hyd. Sheet no. 3023, upon the east by the 25 fathom curve, upon the south and west by Hyd. sheet no. 15, the shoreline of Matinicus Island and Hyd. sheet 3025.

The area was found clear to a depth of 40 ft., with the following exceptions.

A ridge running N & S about 300 meters with a least depth of ~~31~~²⁵ ft. was found about 650 meters S E of No Mans Land, 1500 meters farther S E is Green's Ledge 100 meters in diameter with a least depth of 34 ft. 2 1k shown
25ft

A broken ledge about 200 meters in diameter was found 1000 meters true north of No Mans Land with a least depth of 10 ft. Outside of this shoal the chart depths were verified in this vicinity.

A least depth of 25 ft. was found upon the charted shoal 600 meters true south of the western extremity of Seal Island. This shoal was not dragged over owing to the large number of lobster pots there when the examination was made. However ~~it~~ it is believed to be fairly well developed

It was proven that no less depth than charted exists upon Frenchmen's Ledge, and accordingly the channel between Wooden Ball and Malcolm's Ledge should be used by vessels of deepest draught in preference to the one between Malcolm's Ledge and Seal Island. Malcolm's Ledge when not bare breaks at all times.

Statistics Hyd. sheet no. 16

Date	Letter	Vol	Angles		Miles	Drag Length	Soundings	
			H	K			No.	Angles
1913								
7-9	A	1	33	9	0.5	8000	0	0
8							1	2
11	B	1	72	60	3.5	8000	1	2
12	C	1	72	63	3.5	9900	0	0
15	D	1	90	54	3.2	8000	8	16
16	E	1	120	18	3.0	8000-3500	0	0
17	F	1	93	69	4.5	8350	0	0
21	G	1	81	78	4.5	8000	0	0
22	H	1	63	24	2.0	4000	0	0
8-11	J	2	156		2.5	3000	0	0
16	K	2	84	66	2.5	3000	6	12
21	L	2		18	0.5	2000	1	2
22	M	2	92		1.0	2500	7	14
			956	459	31.2		24	48

Total Angles 1463
Miles 31.2
Soundings 24
Sq. Miles 22

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1203

Plane Table Positions, Hyd. No. 16

Object	Latitude		D. M. Meters	Longitude		D P. Meters	Remarks
	°	'		°	'		
War(fg Wharf Pt.)	43	52	268	68	52	1255	top of staff
White(boulder)	43	52	370	68	53	90	highest ^h pt. of rock
Stick(in crevice)	43	52	1000	68	53	545	top
Two(flag on ledge)	43	52	935	68	52	920	top

1255
90
545
920

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

Sheet No. 3527 *WD*

1. + Are numbers of hydrographic sheets adjoining limits of work shown? *Yes*
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*
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? *yes*
.....
- 19. +Is the shoreline shown? *yes*
- 20.+ Is there an accompanying list of plane table or sextant positions of signals? *no*
- 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? *yes*
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?
- 64.+ Have projection lines been numbered around all the edges? ...
..... *yes*
- 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? *Area to Eastward*

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? *yes*

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? *yes*

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? *yes. This channel is an excellent deep water approach to the Bars.*

81. Are all shoals discovered shown on current issue of chart? *yes*

J. Sawley

HYDROGRAPHIC SHEET 3527.

South Approaches to Penobscot Bay, Maine, by
Assistant N. H. Heck in 1913.

TIDES.

Matinicus Harbor

ft.

Mean low water, or plane of reference

on staff 1.5

Highest tide observed " " 0.0

Lowest " " " " 11.5

Mean range of tide 9.1

U.S. GEOLOGICAL SURVEY

OCT 20 1913

CIDAL EXTENSION

H. 3527.

Wire drag sheet.

Sheet examined at
of Hyd'y & Top

Hyd. Sheet # 3527

Approach to Penobscot Bay.

The area dragged covers the part of the approach to Penobscot Bay between Matinicus Id. and Seal Id. north of Wooden Ball Id.

The plotting was done in the field and verified in the office. The work was then systematized and a tracing made, which shows clearly the max. effective depths, to which the different partial areas have been dragged.

The region dragged was completely covered with the exception of a small area, which was missed by the drag.

Just a few soundings were taken on shoal places struck by the drag. On this way a ridge S.E. of 'No Man's Land' with a least depth of 25 ft. (and not 31 ft. as stated in the Descr. Report) was located. The few soundings taken are not sufficient to outline the limits of this shoal spot and to keep on the safe side the shoal was included into the 23 ft. area recorded during day "K".

At position 27D pge 21. Vol I there is a note, which reads: "Drag aground... Sound out. Holed up and tow off the shoal".

As far as the sounding record goes, no soundings were taken, and, moreover, there is nothing to indicate the existence of a shoal.

In a number of cases, where gradual changes

in the drag depth have been made, the plotting conveys the wrong idea of these changes having been performed instantaneously, and not through the recorded period of time. (See \checkmark_D , \checkmark_F , \checkmark_F , \checkmark_K and others.)

At 11:57 day "D" the guiding boat was at \checkmark_D and "K" at position 9. Assuming that the drag was tightly stretched (the allowance for the catenary formed by the drag may be offset by the length of the tow lines) a straight line connecting positions 9 and 16 should equal 8000 ft. approx, but when scaled off the sheet it measures 8850 ft. (2)

There is a note at the bottom of page 28 day "E", which reads "F to 9 set out to 44 ft." and this note is followed by a note on page 30 repeating that "F to 9 was changed to 44 ft. On other respects the note on page 28 seems to be badly mixed up, and the part of the work following this remark was rejected, inasmuch as this area was redragged during the days "F" and "J".

The records throughout the work were kept in good shape.

J. B. Shkelain.

December 1913