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Department of Commerce and Labor
COAST AND GEODETIC SURVEY

O. H. Tittmann
Superintendent.

State: Maine

DESCRIPTIVE REPORT.

Hyd. 3023 Sheet No. 3023

LOCALITY:

South of Vinalhaven Island

Saddleback ledge to Hurricane
Island
and Isle au Haut Bay

Sad

20,000

190

CHIEF OF PARTY:

N. H. Heck, Assistant

3023

COAST OF MAINE

SOUTH OF VINAL HAVEN ISLAND

AREA COVERED BY WIRE DRAG PARTY

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N. H. HECK, ASSISTANT, CHIEF OF PARTY
GEO. OLSEN, WATCH OFFICER OPERATING DRAG 1
CLEM L. GARNER, AID, OPERATING DRAG 2

AUG. 23 - SEPTEMBER 13, 1909

SCALE 1/20000

3033

OFFICERS IN ADDITION TO THOSE ABOVE.

L.W SMITH JEAN H. HAWLEY, C.Y. HARGER, Aids

T. L. Warner, M. E. McChristie, R. P. Strough, L. F. Walsh, Deck Officers

Tide Gauges

Vinalhaven, Me.	M. L. W. on T.G.	2.5	(for other data see records at office)
North Haven, Me.	" " "	2.0	" " " "

Area south of Vinalhaven Island and Isle au Haut Bay

The area dragged on this sheet is only the beginning of work on this sheet as the exigencies of the work prevented finishing this sheet during this season. The area south of Vinalhaven Island is notable for the large number of pinnacles found in very deep water where there is no indication. The most dangerous of those found have been reported previously for publication in the monthly Notice to Mariners. The area north and west of Saddleback Light house should be navigated with caution by large vessels until the drag work is completed.

The 8400 foot drag was used on this sheet and it indicates how rapidly open area can be covered when the defects that prevented better results than those obtained have been eliminated.

Lobster pots were very numerous throughout this entire region, and this prevented the dragging of a much larger area than that covered.

In the three or four launch drag work there was a guiding launch at each end taking positions independently. In the two launch drag work the planigraphic system of control is used the one angle observed on the end launch being signalled to the guiding launch. A margin of safety is constantly used in the length of the towline base and sufficient overlap is used to insure the covering of area. Besides the buoy is nearly directly over the weight which eliminates a former source of uncertainty.

In general less water was found on the charted shoals than indicated. The purpose was to drag to a depth of 36 feet at M.L.W. and to within two feet of the depth indicated on the shoals in so far as practicable.

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NO. 3023
SOUTH OF VINALHAVEN AND ISLE AU HAUT BAY

Station	Latitude	secs in m	Latitude	secs in m	Remarks
Rim	449 00'	1465	68° 46'	290	Hole in rock on highest point on Brimstone Id.

This was to be determined by triangulation but unfavorable weather and a change of base prevented the completion of the observations.

For the positions of other signals used on this sheet see Sheets 2969 and 2911

STATISTICS FOR HYD. SHEET 10
SOUTH OF VINAL HAVEN ISLAND, ME.

C. & G. SURVEY,
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Drag 1 Launch FRANCIS EATON, Guiding Launch, ADELAIDE, end launch

Date 1909	letter	vol.	angles	soundings	miles	length drag	remarks
Aug. 23	a	1	45	0	2.0	6000	
24	b	1	47	1	3.8	6000 & 2000	3.0 & 0.8
26	c	1	198	0	2.2	2000	
28	d	1	120	2	6.3	6000	
30	e	1	366	2	8.0	2000	
31	f	1	276	2	5.0	2000	
Sept. 2	g	2	100	1	3.5	8400	
8	h	2	108	3	2.5	2000	
10	i	2	54	0	1.5	1750	
13	j	2	366	2	9.5	2000	& 1500
			<u>1680</u>	<u>13</u>	<u>44.3</u>		

Drag 2 Launch KATHERINE, Guiding launch, ADELAIDE, end launch

Aug. 23	a	1	56	0	1.5	6000	
24	b	1	102	0	4.8	6000 & 2000	3.0 & 1.8
26	c	1	198	0	3.5	2000	
28	d	1	153	0	6.0	6000	
30	e	1	252	0	4.8	2000	
31	f	1	42	0	0.7	1200	
Sept. 2	g	2	69	0	5.2	8400 & 2000	4.7 & 0.5
4	h	2	102	1	3.0	1500	
8	j	2	258	1	5.0	1200	
9	k	2	222	4	5.5	1200	
10	l	2	54	0	1.2	1200	
13	m	2	270	3	4.5	1200	
			<u>1888</u>	<u>9</u>	<u>45.8</u>		

Total Angles 3458
Soundings 22
Miles 75 (Long drags not counted separately for each drag)
Area 19 Square miles

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V.E.C.
Dec. 18, 1909.

HYDROGRAPHIC SHEET NO. 3023.

South of Vinal Haven Island and Isle au Haut,
Bay, Maine, by Asst. N. H. Heck in 1909.

TIDES.

	Vinalhaven ft.
Mean low water, or plane of reference on staff	2.5
Lowest tide observed " "	-0.1
Highest " " " "	14.1
Mean range of tide	9.4

Coast and Geodetic Survey
DEC 18 1909
TIDAL DIVISION.

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SHA
1910

U. & G. SURVEY,
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OCT 26 1910
Acc No.

Department of Commerce and Labor
COAST AND GEODETIC SURVEY

C. H. TITTMANN
Superintendent

State: MAINE

DESCRIPTIVE REPORT.

HYDROGRAPHIC Sheet No. 3023 + 3023^a

LOCALITY

South of Vinal Haven Island

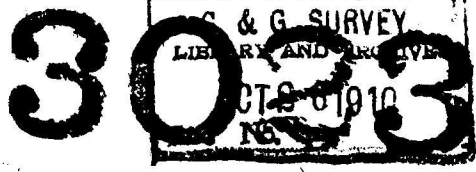
East Penobscot Bay

1900

CHIEF OF PARTY:

N. H. HECK

3023



COAST OF MAINE

SOUTH OF VINALHAVEN ISLAND

and

EAST PENOBSCOT BAY

AREA COVERED BY WIRE DRAG PARTY

N. H. HECK, ASSISTANT, CHIEF OF PARTY.
GEO. OLSEN, WATCH OFFICER, OPERATING DRAG 1.
JEAN H. HAWLEY, ASSISTANT, and
JAS. A. SMITH, AID, OPERATING DRAG 2.

AUGUST 22 to OCTOBER 15, 1910.

SCALE 1/20 000

OFFICERS IN ADDITION TO THOSE ABOVE:

P. S. DONNELL, D. M. KYLE, L. M. FISHER, AIDS, and E. E. REESE, D.O.

TIDE GAUGES.

Vinalhaven, Maine. M. L. W. on T.G. = 2.0

Stonington, Me. T.G. used one day - for data see records for

Hydrographic Sheet No. 2911.

3023

SHEET No. 3023 ---- DESCRIPTIVE REPORT

Area South of Vinal Haven Island

SURVEY,
LIBRARY AND ARCHIVES

OCT 26 1910

Acc. No.

Work was continued below the southern limit of last year's work with a view to determining whether this area, of very uneven bottom, was free from dangerous pinnacles such as were found in this vicinity in 1909. Over this area the aim was to drag to a depth of 36 ft., or more, at mean low water.

The principal shoals found were in the vicinity of Bay Ledge. Their depth, and approximate distance and magnetic bearing from Bay Ledge are as follows:

2 pinnacles with 26ft. and 29 ft. 1000 metres S W'ly

18 ft. 300 metres S E'ly

Ridge running N N E'ly with 31 ft. lying 550 metres and 38 ft. lying 900 metres from ledge

Small pinnacle with 28 ft. 2200 metres N E'ly

On Bay Ledge itself a depth of 3 ft. was found over a small area where sunken rock symbol was formerly given on the chart. This ledge frequently bares on breaking and it is stated by lobstermen that in strong southerly winds breakers extend from the 18-ft. shoal described above to the Ledge.

About 2000 metres S E'ly from Bay Ledge the drag struck drawing 38 ft. In finding shoal the drag slipped off and a depth of 37 ft. was afterwards passed over the spot. A depth of 6 1/2 fathoms should therefore be shown at the point indicated on the smooth sheet. *(6 1/2 fath. entered on smooth sheet at point indicated in pencil by field party)*

A number of 10 fathom spots, to the eastward of Bay Ledge were dragged over without striking. On one occasion the drag grounded on setting out due to the wire becoming slack between uprights and settling down. A least depth of 50 ft. was found at this point which is 4400 metres E'ly from

39 ft
H.S.

H.S.

Bay Ledge. A depth of 37 ft. was afterwards carried across this spot.

In dragging over the Snippershan the drag grounded, but as the drag was too long to develop the shoal, it was removed and a development made with a shorter drag later. This resulted in finding that the shoal was somewhat different from that charted. Where the chart showed a depth of 6 fathoms, a depth of 37 ft. was carried across. Careful sounding developed a least depth of 43 ft. On a spot 530 metres E N E'ly from this a depth of 36 ft. was found where chart shows 8 1/2 fathoms. This was the spot on which the long drag grounded.

Several small areas south of outlying islands south of Vinal Haven Island, missed in 1909 work, were dragged this year in order to make the work in this section complete. The 23 ft. pinnacle lying 1 1/2 miles S S W'ly from Brimstone Island was dragged over without finding less depth.

EAST PENOBSCOT BAY

Owing to change of base last year the work begun in this bay was left in an incomplete state. During the present season all area then missed has been dragged and a section from the line joining Diamond Rock Ledge and Sheep Island Ledge to a line running eastward from Triangle Ledge has been completed.

The general aim has been to carry a depth of 36 ft. except where less h was carted with the exception of the last named section. In the latter a depth of 30 ft. was considered sufficient as there was not enough room to maneuver drag to avoid charted shoals.

The area lying between last years work and the shoals lying to the westward of Isle au Haut was dragged to the northern limit of this sheet from which work was continued to Sheet No. 2911, an arbitrary line being adopted for changing from one sheet to the other. In every case where line continues from one sheet to the other, the last position was transferred to the other sheet and marked with the same number and letter with the number of its sheet in parentheses.

The Brandy shoal reported by Capt. H.C. Graves, commanding the steamer Hydrographer, was found to have no less depth than reported by him, namely 32 ft.

In the area lying westerly and northerly from Saddleback Ledge Lighthouse, partially dragged last year, a few changes were found. As has already been reported 24 ft. was found 160 metres N W'ly from Saddleback Ledge Shoal, where 27 ft. was found last year. A least depth of 2 ft. was found on Saddleback Ledge, ^{Shoal} itself, where 4 ft. was charted. 22 ft. was found 70 metres E N E'ly from this. 28 ft. was found where 29 ft. was charted about $\frac{1}{2}$ mile N W'ly from this shoal

30 ft. was found 170 metres S S W'ly from Saddleback Ledge Light

36 ft. was found 65 metres S E'ly from highest point on Holden Ledge.

In area newly dragged this year a number of shoals were found which have already been reported, their approximate distance and magnetic bearing from Halibut Ledge being as follows;

18 ft. 1050 metres E by S

31 ft. 700 metres E S E

28 ft. 980 metres S E

24 ft. 800 metres S

29 ft. 1800 metres S by W

24 ft. 1425 metres S S W

20 ft. 750 metres S W

A few soundings in the channel between Vinal Haven Island and outlying islands were made when drag work was prevented by unfavorable weather conditions. On the 12 ft. shoal between Old Duke Ledge and Sheep Island Ledge a least depth of 10 ft was found and the extent of the shoal developed.

20 ft. was found where chart shows $3\frac{1}{2}$ fathoms, $\frac{1}{2}$ mile W S W'ly from first shoal named.

Vinal Haven water tower, erected this year, is a very prominent landmark in every direction and is recommended to be placed on the chart. It is

cylindrical in shape being 25 ft. in diameter. Its base is 90 ft. above Mean Sea Level; its height 85 ft. It is painted red.

For method of plotting depths see report for Sheet No. 13.

The correctness of the method of determining the position of the end of the drag furthest from the guiding launch was tested by observing angles from end launch immediately after signalled angle was taken. For 4000ft. drag the position as determined by usual method was, in general, found to be 20 metres to 50 metres inside. It is believed that with amount of overlaps used no portion of the area dragged was missed. This statement is made with due consideration of all possible sources of error.

The drag depths used in the records are the result of tests made in this and previous seasons. Differences in the ratio between the drag depth and the length of upright for Drags 1 and 2 are due to the different styles of small buoys used; Drag 2 using those remaining from last season and Drag 1 a new form adopted during the present season.

STATISTICS FOR HYDROGRAPHIC SHEET NO. 3023.
 SOUTH OF VINALHAVEN ISLAND, and EAST PENOBSCOT BAY, COAST OF MAINE.

DRAG 1. "FRANCIS EATON", Guiding Launch,
 "HELEN MARGARET", End Launch.

DRAG 2. "KATHERINE", Guiding Launch,
 "SOKOKIS", End Launch.

 DATE 1910. LET- VOL. ANG- LES. SDGS. MILES. DRAG. LENGTH LET- VOL. ANG- LES. SDGS. MILES. DRAG. LENGTH DATE

Aug. 22	Aug. 23	Aug. 24	Aug. 27	Aug. 29	Aug. 31	Sept. 1	Sept. 2	Sept. 3	Sept. 8	Sept. 10	Sept. 12	Sept. 13	Sept. 15	Sept. 21	Sept. 22	Sept. 23	Sept. 26	Sept. 27	Sept. 28	Sept. 29	Sept. 30	Oct. 15	
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	
1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	4	5	5	
80	89	84	192	194	12	108	101	120	76	295	204	160	68	140	104	64	70	240	284	275	4205	4205	
2	2	0	1	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	1	10	30	30
6.00	2.00	2.00	4.50	6.00	.50	4.50	4.00	3.50	2.00	8.00	3.50	5.00	1.25	4.25	4.00	1.25	.50	5.00	5.00	72.75	77.25	77.25	
8400-6300	6300	2000	1500-2800	7700-3850	8400	8400-4950	5600	3500	3850	2500	1750	1750	3850	1750	3850	1400	1250	2800-1000	1000	4205	4205	4205	
0	1	1	0	1	1	6	1	1	2	2	1	1	0	4	1	1	2	1	2	2	1	1	
6.00	2.00	7.00	3.00	.50	5.00	4.75	2.00	9.50	2000	222,150-1-4.75,3.75-3850	.50	800	1200	1600	1200	1200	1200	1200	1200	900-1400	750-800	8400	
Aug. 22	Aug. 23					Sept. 1	2	3	8	10	12	13	15	21	22	23	26	27	28	29	30	Oct. 15	

TOTALS - 4 2755 10 72.75 5 4205 30 77.25 *****

TOTAL ANGLES 6960
 SOUNDINGS 40
 MILES 150
 AREA 35 Sq. Mi.

U. S. G. SURVEY,
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3023

C. & G. SURVEY,
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OCT 26 1910
Acc. No.

HYDROGRAPHIC SHEET NO. 3023.

South of Vinalhaven Island and East Penobscot Bay, Maine,

by Assistant N. H. Heck, in 1910.

TIDES.
**

	Vinalhaven. ft.
Mean low water, or plane of reference on staff	2.00
Lowest Tide observed " "	-0.9
Highest " " " "	11.0
Mean range of Tide	

 The Tide Gauge at Stonington, Me. was used on one day,
 (Oct. 15th). For data pertaining to this T.G., see descrip-
 tion accompanying Hyd. Sheet No. 2911.

3023

Hyd Sheet #3023

Feb. 11, 1910.

At L3e (red), about 1/2 mile south of sig. Row
a sounding of 29 ft. was taken and later the drag
set to a depth of 33 ft. passed over this spot without
touching.

At L2e (blue), about 1 mile southwest of "Key", a depth
of 33 ft. was found with the lead and the drag did
not touch when set to 37 ft.

The soundings and positions were verified
and found correct.

H. L. Simpson

The work of 1910 has been verified and found
correct.

H. L. S.