

# 7149

Diag'd. on Diag. Ch. No. 1204-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. LY-2146 Office No. H-7149

### LOCALITY

State Maine

General locality Cape Elizabeth

Locality West Cod Ledge

1946-'47

CHIEF OF PARTY

Jack C. Sammons

LIBRARY & ARCHIVES

Dec. 20, 1947

DATE

6712  
7149

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H-7149

Field No. LY-2146

State Maine

General locality Coast of Maine

Locality Cape Elizabeth WEST COD LEDGE

Scale 1:20,000 Date of survey 30 May to 4 September 1946

Instructions dated 8 March 1940; Supp. Inst. 27 March 1946

Vessel LYDONIA, Launch No. 79

Chief of party Jack C. Sammons

Surveyed by E. B. Lewey

Soundings taken by fathometer, graphic recorder, hand lead, wire Graphic recorder

Protracted by W. W. Williamson and A. G. Atwill

Soundings penciled by A. G. Atwill

Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~

REMARKS: Due to unfavorable weather for offshore launch hydrography during the season, this survey was not completed. Additional splits and cross lines are required. Also, holidays were left at its eastern and southern limits.

DESCRIPTIVE REPORT

To accompany

H-7149 (1946)

Hydrographic Survey Sheet (Field No. LY-2146)

Project HT-248

Ship LYDONIA

Jack C. Sammons, Comdg.

1946

Surveyed by E. B. Lewey

PROJECT:

Project HT-248, Original Instructions dated 8 March 1940. Supplemental Instructions dated 27 March 1946. ✓

SURVEY LIMITS AND DATES:

This survey covers West Cod Ledge which is approximately 3 miles east of Cape Elizabeth and extends in a NE - SW direction. It makes junctions with Surveys H-6661 on the north, H-6677 on the west, and LY-4146 H-7147 (1946) (Field) on the east and south. ✓

Field work on the sheet began on 30 May 1946 and ended on 4 September 1946. ✓

VESSELS AND EQUIPMENT:

Soundings were obtained with Launch No. 79 using the 808 depth recorder No. 75. ✓

TIDE AND CURRENT STATIONS:

No tide or current stations were maintained by the LYDONIA during this field season. ✓

Tide reducers for the boat sheet were obtained from the predicted tides at Portland, Me. No correction was applied to the prediction. ✓

Final tide reducer, and time differential (if any), should be obtained from the Division of Tides and Currents. ✓

SMOOTH SHEETS:

The smooth sheet is to be plotted by the Hydrographic Section, Southeastern District Office. ✓

CONTROL STATIONS:

A list of signals used on this survey is attached herewith. ✓

It was necessary to out in Hydrographic Signal CAT for control on the SW corner of the sheet. The signal was located by sextant cuts from the launch. These cuts are recorded in the sounding volume. ✓

SHORELINE AND TOPOGRAPHY:

None. ✓

SOUNDINGS:

Soundings were obtained with 808 depth recorder No. 75 using standard methods. ✓

Abstracts of temperature and salinity corrections and scale corrections for the 808 No. 75 have been furnished the Hydrographic Section, South-eastern District Office. ✓

Scale corrections were determined by three sets of bar checks made in smooth water. The results were tabulated and curves drawn from which the scale offsets were determined. Application of these scale offsets to the T & S corrections give the final corrections for the 808 depth recorder. Scale offsets (or corrections) as determined are attached herewith. ✓

CONTROL OF HYDROGRAPHY:

All hydrography was controlled by three point fixes. ✓

ADEQUACY OF SURVEY:

H-7147(1946)

Junctions with the adjoining survey, LY-4146, are regarded as satisfactory for this area. The bottom is exceedingly rough and exact junctions cannot be expected. ✓

Additional work is required on this sheet. Due to unfavorable weather for offshore launch hydrography during the season, this survey was not completed. Additional splits and cross lines are necessary. Also, holidays were left at its eastern and southern limits. ✓  
see ~~the~~ wk. of 1947

Soundings on K day, positions 66 to 114, inclusive, should be verified by cross lines. The fathometer operator failed to mark scales or positions numbers on the fathogram and a check on the soundings as he read them is impossible. Review par.7C. ✓

CROSS LINES:

Only one short cross line was run and that was in the SW corner of the sheet. This cross line agrees satisfactorily with the regular lines. ✓

CROSS LINES: (CONT.)

Additional cross lines are necessary. ✓

COMPARISON WITH PRIOR SURVEYS:

Satisfactory agreement was made with work done on H-6661<sup>(1941)</sup> and H-6677<sup>(1941-42)</sup> ✓

COMPARISON WITH CHART:

In most cases, Chart No. 315 shows shoaler water over the rocks on West Cod Ledge than the survey verified. However, since only a regular system of lines were run, it is suggested that the charted depths be retained until further investigation is made when this survey is completed. ✓

DANGERS AND SHOALS:

No additional dangers or shoals were found by this survey. ✓

COAST PILOT INFORMATION:

None. ✓

AIDS TO NAVIGATION:

Charted positions of the buoys in the area were not verified. Exact location of all buoys, and an examination of all shoals, in accordance with instructions was contemplated. The opportunity to do this work was not realized. See #d.wk. of 1941 ✓

Remaining subheadings are not applicable. ✓

Respectfully submitted,

*Ernest B. Lewey*  
Ernest B. Lewey,  
Lt. Comdr., USC&GS.

Approved and Forwarded:

*Jack C. Sammons*  
Jack C. Sammons,  
Lt. Comdr., USC&GS.,  
Commanding Ship LYDONIA.

SIGNAL STATIONS USED ON SHEET 2146 - LAUNCH 79

HYDROGRAPHIC SIGNAL

CAT

TRIANGULATION STATIONS

DOC - Dr. Cummings House South Chimney, 1923  
CAPE - Cape Elizabeth East L. H., 1904, 23  
BETH - Cape Elizabeth Radar Tower  
HEAD - Portland Head L. H., 1850, 54  
RAM - Ram Island Ledge L. H., 1904  
CUSH - Cushing Island Radar Tower  
PEAK - Peak Island Radar Tower  
JUNK - Junk of Pork Beacon  
WELL - Jewell Island Radar Tower  
ROCK - Halfway Rock L. H., 1904, 41

SCALE CORRECTIONS FOR 808 NO. 75

To be used in connection with T & S curves

Coast of Maine

Sheet LY-2146

Project HT-248

<u>SCALE</u>	<u>CORR.</u>
A	0.0*
B	+ 0.7 ft.
C	+ 1.7 ft.
D	+ 3.2 ft.

\* Check T & S curve at 12 ft. for each curve used. If it passes through the 0.0 corr. at 12 ft., apply these constants directly. In case T & S curve does not pass through 0.0 at 12 ft., apply the difference to the constants.

Example: Reading of T & S curve at 12 ft. is -0.2 ft. add 0.2 ft. to curve corrections for A scale and add 0.9 ft. to curve corr. for B scale, and so on.

Apply same difference to A scale (fath), or, if T & S curve is 0.0 at 12 ft., then use it for A scale (fath.) directly.

3079 ✓  
PHB

STATISTICS - SHEET NO. 2146 (Launch 79)

<u>DATE</u> 1946	<u>DAY</u>	<u>VOL.</u>	<u>POS.</u>	<u>STAT. MILES</u> <u>SDG.</u>	<u>STAT. MILES TOTAL</u>
5/30	a	1	32	6.3	7.2
6/2	b	1	208	47.1	50.5
6/3	c	1 & 2	167	37.0	47.7
6/14	d	2	196	42.5	52.8
6/15	e	3	215	47.0	49.6
6/16	f	3	109	23.4	32.6
6/19	g	4	171	35.9	47.0
7/26	h	4 & 5	144	35.2	44.3
8/9	j	5	206	41.3	57.9
9/4	k	5 & 6	170	34.4	39.8
TOTALS			1618	350.1	429.4



DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. **H7149**

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H-7149

Field No. Ly-2146

State Maine

General locality ~~Coast of Maine~~

Locality Cape Elizabeth WEST COD LEDGE

Scale 1:20:000 Date of survey 30 May to 4 Sept. 1946  
2 Oct. to 7 Oct. 1947

Instructions dated 8 March 1940: Supp. Inst. 27 March 1946

Vessel LYDONIA Launch #79 and Ship

Chief of party Jack C. Sammons

Surveyed by E. B. Lewey

Soundings taken by fathometer, graphic recorder, hand-lead, wire

Protracted by A. G. Atwill

Soundings penciled by A. G. Atwill

Soundings in fathoms feet at MLW MLLW

REMARKS: Detailed developing was not attempted on this sheet. The area had  
been wire dragged previously and developing was considered unnecessary and  
uneconomical.

Additional cross lines were contemplated, but time to run them was  
not available.

ADDENDUM

TO

DESCRIPTIVE REPORT, SHEET H-7149 (Field Ly-2146)  
(submitted in 1946)

Project HT-248

Coast of Maine

Season of 1947

Ship LYDONIA

Jack C. Sammons, Comdg.

Surveyed by E. B. Lewey

GENERAL:

References to Instructions, Area, Equipment, Survey Methods, Control, Tide and Fathometer Corrections as made in the original Descriptive Report apply to the work done on this sheet in 1947. ✓

1947 work was begun on 2 October and ended on 7 October 1947. The holidays on the eastern and southern limits of the sheet were filled in. ✓

Additional lines were run over the area covered by positions 66-114 K day (these positions were not marked on the fathogram). Agreement with last year's work was satisfactory. Review, Par. 7c.

Due to unfavorable weather for launch work an attempt was made to fill in the SE corner with the ship. Before this area could be completed at 100 meter spacing of lines, the weather shut in. The weather remained unfavorable for several days and it was thought unecomomical to remain on the grounds longer. However, the 200 meter spacing obtained is the same as the adjoining ship work. Review, par. 9. ✓

COMPARISON WITH PRIOR SURVEYS:

Satisfactory agreement was made with work done on Sheet H-6661, on the north and with the LYDONIA work of 1946, on the east and south. (1941)  
H-7147

COMPARISON WITH CHARTS:

Chart #1204: Most depths on this chart appear to be slightly out of position. Discrepancies of note are as follows:

Charted 41 ft. sounding in Lat.  $43^{\circ}35.67'$  and Long.  $70^{\circ}03.75'$ . A 41<sup>5</sup> ft. sounding was obtained nearby. Recommend the 41 ft. sounding be retained on account of the irregular bottom. 41 retained from H-3677W.D. (1914)

Charted 81 ft. sounding in Lat.  $43^{\circ}35.24'$  and Long.  $70^{\circ}07.28'$  was not verified. It is thought that this sounding is out of position and it is suggested that the sounding be removed from the chart. Disregard present survey depths supersede ✓

Charted 64 ft. sounding in Lat.  $43^{\circ}34.50'$  and Long.  $70^{\circ}09.67'$  was not verified. It is thought to be out of position and it is recommended that the sounding be removed from the chart. Disregard; comparable depths nearby on present survey adequate for charting

Charted 87 ft. sounding in Lat.  $43^{\circ}34.63'$  and Long.  $70^{\circ}08.10'$  Disregard; was not verified. It is thought to be out of position and present depths it is recommended that the sounding be removed from the chart. <sup>supersede</sup>

Charted 87 ft. sounding in Lat.  $43^{\circ}33.73'$  and Long.  $70^{\circ}09.48^0'$  Disregard; was not verified. It is thought to be out of position and Review, par. it is recommended that the sounding be removed from the chart. 5A(15)

Charted 82 ft. sounding in Lat.  $43^{\circ}33.30'$  and Long.  $70^{\circ}07.70'$  was not verified. Thought to be out of position, recommend its removal from chart. Disregard; comparable depths nearby on present survey adequate for charting.

Charted 46 ft. sounding in Lat.  $43^{\circ}32.68'$  and Long.  $70^{\circ}10.38'$  was not verified. Thought to be out of position, recommend its removal from chart. Disregard; see Review, par. 5A(14)

(actually 20)  
Charted 19 ft. sounding in Lat.  $43^{\circ}32.50'$  and Long.  $70^{\circ}10.90'$  was not verified. A depth of 28<sup>5</sup> ft. was obtained 190 meters SSE. Although the charted depth appears to be slightly out of position, it is suggested that the 19 ft. depth be retained. The 19 is actually 20 and has been carried fwd. from H-841(1863) at  $\phi 43^{\circ}32.35'$ ,  $\lambda 70^{\circ}10.87'$

Charted 62<sup>3</sup> ft. sounding in Lat.  $43^{\circ}32.28^5'$  and Long.  $70^{\circ}10.58^162'$  was not verified. Thought to be out of position, recommend its removal from the chart. Disregard; Review, par. 5A(7)

(actually 62)  
Charted 61 ft. sounding in Lat.  $43^{\circ}32.42^0'$  and Long.  $70^{\circ}10.00^4'$  was not verified. However, suggest that it be retained due to irregular bottom. Sdg. retained from H-699(1859)

Charted 75 ft. sounding in Lat.  $43^{\circ}32.07'$  and Long.  $70^{\circ}09.90'$  was not verified. Thought to be charted about 200 meters too far west, recommend its removal from the chart. Disregard; lesser depths obtained nearby on present survey.

Chart #315: Discrepancies of note are as follows:

Charted 44 ft sounding in Lat.  $43^{\circ}35.95'$  and Long.  $70^{\circ}10.55^0'$  was not verified. A depth of 43 ft. was obtained 350 meters <sup>west</sup> to south. The 44 ft. sounding is apparently out of position, recommend its removal from chart. Disregard; Review, par. 5B.(1)

Charted 35 ft. sounding in Lat.  $43^{\circ}35.70^68'$  and Long.  $70^{\circ}10.67'$  was not verified. A depth of 37<sup>6</sup> ft. was obtained 160 meters to south. It is suggested that the 35 ft. sounding be retained, but moved 160 meters to the south. Disregard See Review par. 5A.(1)

Charted 57 ft. sounding in Lat.  $43^{\circ}35.21^0'$  and Long.  $70^{\circ}06.72^0'$  was not verified. However, it is suggested that the charted depth be retained due to the irregular bottom. Sdg. verified & carried fwd. to present survey from H-860 (1864)

Charted 29 ft. sounding in Lat.  $43^{\circ}35.16'$  and Long.  $70^{\circ}06.40'$  and  $38'$  is apparently out of position. A  $25'$  ft. sounding was obtained  $120$  meters ~~SSE~~ <sup>SSW</sup>. It is suggested that the charted depth be deleted. (sdg. verified & carried fwd. to present survey from H-3677 W.D. (1914))

Charted 33 ft. sounding in Lat.  $43^{\circ}35.21'$  and Long.  $70^{\circ}05.18'$ .  $42'$  was not verified. A depth of  $42$  ft. was obtained  $120$  meters to southeast. Due to irregular bottom here, it is recommended that the  $33$  ft. sounding be retained. Comparable depths occur nearby on present survey. Sdg. carried fwd. from H-3677 W.D. (1914)

Charted 40 ft. sounding in Lat.  $43^{\circ}35.04'$  and Long.  $70^{\circ}04.30'$  was not verified, but a depth of  $42'$  ft. was obtained  $60$  meters southwest. It is recommended that the  $40$  ft. sounding be retained. Sdg. carried fwd. from H-3677 W.D. (1914)

Charted 38 ft. sounding in Lat.  $43^{\circ}35.34'$  and Long.  $70^{\circ}05.95'$  was not verified, but a depth of  $42$  ft. was obtained just to southwest. It is recommended that the  $38$  ft. depth be retained. Disregard  $34$ - &  $36$ -ft. depths  $50$  m. to S.W. on present survey. The  $38$  is in agreement with present depths.

Charted 31 ft. sounding in Lat.  $43^{\circ}34.54'$  and Long.  $70^{\circ}07.40'$  was not verified. This sounding is thought to be out of position, suggest that it be retained but moved about  $150$  meter east of its charted position. Position verified; sdg. carried fwd. from H-3677 W.D. (1914) which describes a small point of rock surrounded by deeper water.

Charted 26 ft. sounding in Lat.  $43^{\circ}34.38'$  and Long.  $70^{\circ}07.74'$  was not verified. A  $31$  ft. sounding was obtained  $120$  meters southeast and it is recommended that the  $26$  ft. sounding be retained but moved slightly to the southeast. The verified sdg. plots within  $50$  m. of the  $31$  on the pres. survey where it has been carried fwd. from H-841 (1863)

Charted 32 ft. sounding in Lat.  $43^{\circ}34.50'$  and Long.  $70^{\circ}07.20'$  was not verified. A  $32'$  ft. sounding was obtained  $100$  meters south. It is recommended that the  $32$  ft. sounding be retained. ~~but moved 120 meters south of its charted position.~~ Sdg. carried fwd. from H-3677 W.D. (1914)

Charted 41 ft. sounding in Lat.  $43^{\circ}34.80'$  and Long.  $70^{\circ}06.96'$  was not verified. The sounding is thought to be slightly out of position, but recommend it be retained due to irregular bottom. Sdg. carried fwd. from H-3677 W.D. (1914)

Charted 43 ft. sounding in Lat.  $43^{\circ}34.62'$  and Long.  $70^{\circ}06.18'$  was not verified. A  $46'$  ft sounding was obtained just to the south and it is recommended that the charted depth be retained. Sdg. carried fwd. from H-3677 W.D. (1914)

Charted 40 ft. sounding in Lat.  $43^{\circ}34.50'$  and Long.  $70^{\circ}05.30'$  was not verified, but a depth of  $44'$  ft. was obtained  $200$  meters east and it is recommended that the charted depth be retained. Sdg. carried fwd. from H-3677 W.D. (1914)

- Charted 31 ft. sounding in Lat.  $43^{\circ}34.30^2$  and Long.  $70^{\circ}10.23^0$  was not verified. 36 ft. was the shoalest depth obtained, but it is suggested that the 31 ft. depth be retained. Sdg. retained. ✓  
from H-841 (1863); also a 33-ft. sdg. carried fwd. nearby from H-3677 (1914).
- Charted 35 ft. sounding in Lat.  $43^{\circ}34.34^1$  and Long.  $70^{\circ}10.35^1$  is apparently out of position. Suggest that it be deleted. Sdg. has been ✓  
deleted from chart and is superseded by the 33-ft. sdg. mentioned in preceding par.
- Charted 4 ft. <sup>(actually 4 1/2 ft.)</sup> sounding in Lat.  $43^{\circ}33.25^1$  and Long.  $70^{\circ}09.48^1$  was not verified. A  $9^{1/2}$  ft. sounding was obtained 240 meters to the east. Charted depth is out of position, but suggest that it be retained in place of the  $9^{1/2}$  ft. sounding. The depth & position ✓  
of the  $4^{1/2}$  verified; sdg. carried fwd. 140 meters west of the  $9^{1/2}$ .
- Charted 76 ft. sounding in Lat.  $43^{\circ}32.55^1$  and Long.  $70^{\circ}11.58^1$  Disregard; see ✓  
was not found, nor any indication of it. Recommend it be review, par. 5A(10)  
deleted.
- Charted 20 ft. sounding in Lat.  $43^{\circ}32.44^1$  and Long.  $70^{\circ}10.89^1$  See review, ✓  
was not verified. Recommend the depth be retained but shifted par. 5A(16)  
about 100 meters southeast of its charted position. Sdg. verified  
and carried fwd. at  $\phi 43^{\circ}32.35'$ ,  $\lambda 70^{\circ}10.87'$
- Charted 40 ft. sounding in Lat.  $43^{\circ}32.57^3$  and Long.  $70^{\circ}10.68^7$  Disregard; ✓  
was not verified and it is suggested that the sounding be review, par. 5A(14)  
deleted.
- Charted 33 ft. sounding in Lat.  $43^{\circ}32.93^1$  and Long.  $70^{\circ}09.91^1$  ✓  
was not verified. A 29 ft. sounding was obtained 120 meters  
to southeast. It is recommended that the charted depth be  
deleted. Prior 33 has been deleted from chart & superseded by the present 29 nearby.
- Charted 22 ft. sounding in Lat.  $43^{\circ}33.00^1$  and Long.  $70^{\circ}09.62^1$  ✓  
was not verified, but suggest that it be retained. Sdg. carried fwd.  
from H-3677 W.D. (1914). A 24-ft. sdg. was obtained nearby on present survey.
- Charted 96 ft. sounding in Lat.  $43^{\circ}32.98^2$  and Long.  $70^{\circ}10.17^2$  Disregard; ✓  
was not verified and it is recommended that the sounding be review, par. 5A(8)  
deleted.
- Charted 23 ft. sounding in Lat.  $43^{\circ}31.78^5$  and Long.  $70^{\circ}09.95^3$  ✓  
was not verified. 30 ft. soundings were obtained about 120 100  
meters south. It is recommended that the 23 ft. depth be  
retained; but suggest that it be moved about 120 meters south  
of its charted position. The 23 and a 27-ft. sdg. carried fwd. from H-3677 W.D. (1914)
- Charted 20 ft. sounding in Lat.  $43^{\circ}32.09^1$  and Long.  $70^{\circ}09.00^1$  Disregard; ✓  
was not verified. A  $2^{1/2}$  ft. sounding was obtained 250 meters. See Review,  
south. It is recommended that the 20 ft. sounding be deleted. par. 5A(2)  
and a 20-ft. sdg. carried fwd. from H-403 (1853).
- Charted 58 ft. sounding in Lat.  $43^{\circ}32.17^1$  and Long.  $70^{\circ}09.06^1$  Disregard; ✓  
was not verified. Sounding is apparently out of position, Review, par. 5A(2)  
suggest that it be deleted.
- Charted 36 ft. sounding in Lat.  $43^{\circ}32.13^1$  and Long.  $70^{\circ}08.82^1$  ✓  
was not verified. There are shoaler depths immediately to

the south. Suggest that the sounding be deleted. Sdg. may be disregarded; shallower depths occur close by on present survey.

Charted 20 ft. sounding in Lat. 43°31.97' and Long. 70°08.87' was not verified. A depth of 232 ft. was obtained 150 meters to the west southwest. It is recommended that the 20 ft. depth be retained but moved 150 meters west southwest of its charted position. Sdg. verified & carried fwd. from H-403 (1853) to the present survey about 50 m. west of its charted position.

Charted 56 ft., 49 ft., and 43 ft. soundings in approximate Lat. 43°33.00' and Long. 70°08.50' were not verified. These soundings are apparently out of position and it is suggested that they be deleted.

Disregard; see Review, par. 5A(3)

DANGERS AND SHOALS:

14 ft. spot in Lat. 43°36.07' and Long. 70°04.40'. A 11 ft. sounding was obtained nearby on Sheet H-6661. Recommend that the 11 ft. sounding be charted. The area was not developed on this sheet. (The 11 originates with H-6662 W.D. (1941))

27  
~~28~~ ft. spot in Lat. 43°35.62' and Long. 70°05.46' ✓ 74 m blue; 80-81 m (blue)

40  
~~34~~ ft. spot in Lat. 43°35.65' and Long. 70°04.72' ✓ 40-41 l (blue)

29  
~~25~~ ft. spot in Lat. 43°35.08' and Long. 70°06.36' ✓ 59-60 k (blue)

33  
~~32~~ ft. spot in Lat. 43°34.82' and Long. 70°06.18' ✓ 69-70 A (red)

43  
~~42~~ ft. spot in Lat. 43°34.30' and Long. 70°05.80' ✓ 104-105 A (red)

31 ft. spot in Lat. 43°34.37' and Long. 70°07.65' ✓ 18 f (blue)

~~40 ft. spot in Lat. 43°34.28' and Long. 70°09.10' Error: B Scale read instead of C Scale  
Pos. 74-78 d day (blue)~~

36 ft. spot in Lat. 43°34.28' and Long. 70°10.20' ✓ 92-93 b (blue)

9 1/2  
4 ft. spot in Lat. 43°33.25' and Long. 70°09.30'. Chart #315 shows a depth of 4 ft. slightly to the west. Recommend that the 4 ft. sounding be retained in place of the 6 ft. sounding. (See item #3 on previous page 4)

25  
~~26~~ ft. spot in Lat. 43°32.29' and Long. 70°10.86' ✓ 37-38 h

22  
~~23~~ ft. spot in Lat. 43°31.95' and Long. 70°09.00' ✓ 107 d

30 ft. spot in Lat. 43°31.72' and Long. 70°09.90' ✓ 51-52 n

AIDS TO NAVIGATION:

Black & Red hor. stripped N buoy in Lat. 43°36.02' and Long. 70°04.06' ✓

Can buoy C1 in Lat.  $43^{\circ}31.83^{\prime}$ <sup>5'</sup> and Long.  $70^{\circ}08.62^{\prime}$  ✓

Buoy <sup>(FLG)</sup>~~(FIG)~~ "3" Bell in Lat.  $43^{\circ}33.41^{\prime}$  and Long.  $70^{\circ}08.68^{\prime}$  ✓

Buoy N"2AR" in Lat.  $43^{\circ}33.03^{\prime}$  and Long.  $70^{\circ}09.64^{\prime}$  ✓

Buoy, Black & Red hor. stripped C "DA" in Lat.  $43^{\circ}32.38^{\prime}$  and Long.  $70^{\circ}10.80^{\prime}$  ✓

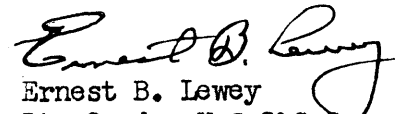
Buoy, (FLW) "7" Gong in Lat.  $43^{\circ}36.10^{\prime}$  and Long.  $70^{\circ}11.00^{\prime}$ <sup>10.98'</sup> ✓

Buoy, (FLW) "22" Whistle in Lat.  $43^{\circ}32.12^{\prime}$  and Long.  $70^{\circ}11.16^{\prime}$ <sup>3'</sup> ✓


Note: Time was not available to get an accurate location of other buoys within limits of the sheet. ✓

Remaining subheadings are not applicable.

Respectfully submitted,

  
Ernest B. Lewey  
Lt. Comdr. U.S.C&G.S.

Approved & Forwarded:

  
Jack C. Sammons  
Lt. Comdr. U.S.C&G.S.  
Commanding Ship LYDONIA

SIGNAL STATIONS USED ON SHEET H-7149 (Field LY-2146)

SHIP AND LAUNCH #79

Season of 1947

TRIANGULATION STATIONS

ROCK — Halfway Rock L.H., 1904-41  
WELL — Jewell Island Radar Tower  
RAM — Ram Island L.H., 1904  
HEAD — Portland Head L.H., 1850 -54  
CAPE — Cape Elizabeth East L.H., 1904-43  
BETH — Cape Elizabeth Radar Tower  
DOC — Dr. Cummings House South Chimney, 1923



STATISTICS - SHEET H-7149 (Field LY-2146)

SHIP AND LAUNCH #79

Season of 1947

<u>DATE</u>	<u>DAY</u>	<u>VOL.</u>	<u>POS.</u>	<u>STAT.MILES</u>	<u>SDG.</u>	<u>AREA</u>	<u>STAT MILES</u>	<u>TOTAL</u>
10/2	1(#79)	7	57	13.1			17.7	
10/3	m "	7	173	40.0			44.9	
10/4	n "	8	136	27.8			36.1	
10/7	A(ship)	9	128	23.8			54.9	
TOTAL 1947		3	494	104.7		9.0	153.6	
TOTAL 1946		6	1618	350.1		29.8	429.4	
TOTAL FOR SHEET		9	2112	454.8		38.8	583.0	

H-7149

(Additional work 1947)

The original copy of Descriptive Report was erroneously sent to Washington Office by Ship Lydonia.

The Processing Office Addendum to Descriptive Report is enclosed and is to be attached to the original copy.

The Processing Office copy of the Descriptive Report is being forwarded with the request that it be returned after corrections have been noted.

It is believed that velocity and tide corrections, for 1946 launch work, were sent to <sup>the Washington</sup> ~~that~~ office with sheets H-7147 or H-7148.

A D D E N D U M

to accompany

HYDROGRAPHIC SURVEY H-7149 (Field No. Ly-2146)

Latitude 43°-35' and Longitude 70°-06' Pos. 66K to 114K (blue)

Vol. 6 soundings were not plotted on smooth sheet. When this work was done in 1946 season, the fathometer operator did not mark positions or scale changes on fathogram. (See note page 2 in 1946 Descriptive Report). A note was made on Boat Sheet by this office prior to the 1947 field season, requesting that these lines be re-run. Some crosslines were run in this area but these are not considered adequate to properly delineate the bottom -.

After considerable endeavor by this office to correctly interpret the fathogram, it was felt that any result obtained would be doubtful. An overlay of these soundings, as they were furnished by the field is being submitted with smooth sheet.

*See Review  
par. 7c.*

Respectfully submitted,

*Hugh L. Proffitt.*

Hugh L. Proffitt  
Cartographer

Norfolk, Va.  
Dec. 22, 1947

*George L. Anderson*

Approved and Forwarded

George L. Anderson  
Supervisor, Southeastern District

SIGNAL STATIONS USED ON H-7149 (Ly-2146)

SHIP AND LAUNCH 79

SEASONS - 1946 -47

TRIANGULATION

CAPE ELIZABETH EAST L.H., 1904-43

CAPE ELIZABETH RADAR TOWER

CUSHING ISLAND RADAR TOWER

(DOC) DR. CUMMINGS HOUSE SOUTH CHIMNEY, 1923

HALFWAY ROCK L.H., 1904-41

JEWELL ISLAND RADAR TOWER

JUNK OF PORK BEACON

PEAK ISLAND RADAR TOWER

PORTLAND HEAD L.H., 1850 - 1933

RAM ISLAND LEDGE L.H., 1904-41

HYDROGRAPHIC

CAT VOL. 4,5

*Shorn*

## TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

12 January 1948

Division of Charts: H. W. MURRAY

Plane of reference approved in  
10 volumes of sounding records for

HYDROGRAPHIC SHEET 7149

Locality - Cape Elizabeth, Coast of Maine

Chief of Party: J. C. Sammons in 1946 - 1947  
Plane of reference is mean low water, reading  
3.6 ft. on tide staff at Portland  
19.0 ft. below B. M. 31 (1910)

Height of mean high water above plane of reference is 8.9 feet.

Condition of records satisfactory except as noted below:

*E. C. McKay*  
*Section*

Chief, ~~Division of Tides and Currents.~~

GEOGRAPHIC NAMES

Survey No.

H-7149

Name on Survey

On Chart  
No.

On previous survey  
No.

On U. S. Quadrangle  
Maps

From local  
information

On local Maps

P. O. Guide or Map

Rand McNally Atlas

U. S. Light List

A

B

C

D

E

F

G

H

K

Maine			(for title)							1
Cape Elizabeth			" "							2
West Cod Ledge			" "							3
										4
Willard Rock										5
Mitchell Rock										6
West Hue and Cry										7
East Hue and Cry										8
Old Anthony Rock										9
Alden Rock										10
Corwin Rock										11
West Cod Ledge Rock										12
Biche Rock										13
Bulwark Shoal										14
										15
										16
										17
										18
										19
Portland			(location of tide staff)							20
										21
										22
										23
										24
										25
										26
										27

Names underlined in red are approved. 12/8/48. L. Heck

(see chart 1204)

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. **H7149**.....

Records accompanying survey:

Boat sheets .1...; sounding vols. 10...; wire drag vols. 0....;  
bomb vols. ..0...; graphic recorder rolls .16...;  
special reports, etc. ....  
.....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	.....
Number of positions checked	.....
Number of positions revised	.....
Number of soundings revised (refers to depth only)	.....
Number of soundings erroneously spaced	.....
Number of signals erroneously plotted or transferred	.....
Topographic details	Time .....
Junctions	Time .....
Verification of soundings from graphic record	Time .....

Verification by..... *A. R. Stirni* ..... Total time ..... Date .....

Reviewed by..... *J. A. Dimonose* ..... Time *111 hrs* ..... Date *12/1/48*

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7149

FIELD NO. LY-2146

Maine, Cape Elizabeth, West Cod Ledge  
Surveyed in May 1946 - October 1947      Scale 1:20,000  
Project No. HT-248

Soundings:

Control:

808 Fathometer

Sextant fixes on shore signals

Chief of Party - J. C. Sammons  
Surveyed by - E. B. Lewey  
Protracted by - A. G. Atwill; W. W. Williamson  
Soundings plotted by - A. G. Atwill  
Verified and inked by - A. R. Stirni  
Reviewed by - T. A. Dinsmore, December 1, 1948  
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline and signals are from topographic quadrangles T-8513, T-8514 and T-8519 of 1943. The cuts for hydrographic signal CAT are recorded in the sounding records of the present survey.

2. Sounding Line Crossings

Depths at crossings are in good agreement considering the irregularity of the bottom. It is noted that few cross-lines were run.

3. Bottom Configuration and Depth Curves

This offshore survey covers West Cod Ledge, a submerged ridge which extends in a northeasterly direction from Old Anthony Rock in lat.  $43^{\circ} 32.5'$ , long.  $70^{\circ} 10.9'$ , to Bulwark Shoal in lat.  $43^{\circ} 36.1'$ , long.  $70^{\circ} 04.4'$ . Many irregular submerged knolls and ridges rise prominently elsewhere in the area.

Except over the features noted above, depths range from 60 to 200 feet.



The usual depth curves, supplemented by the 90-ft. curve, adequately delineate the extreme bottom irregularities of this area.

#### 4. Junctions with Contemporary Surveys

Adequate junctions were effected with H-6661 (1941) on the north and H-6677 (1941-42) on the west. The junction with H-7147 (1946) on the east and south will be considered in the review of that survey.

#### 5. Comparison with Prior Surveys

A.	H-403 (1853) 1:20,000	H-841 (1863) 1:20,000
	H-699 (1859) 1:40,000	H-860 (1864) 1:40,000
	<u>H-824 (1853) 1:789</u>	<u>H-4303 (1923) 1:20,000</u>
		<u>H-4853 (1928) 1:40,000</u>

These prior surveys, taken together, cover the area of the present survey. Except for H-824 a large-scale development of Alden Rock, and H-841 which developed the other important ledges in the area, these early surveys show sparse development. The differences revealed by a comparison of the prior and present surveys are attributed mainly to the extreme unevenness of the bottom. Discrepancies of note are as follows:

- (1) The 35-ft. sounding (Charts 315 and 325) in lat.  $43^{\circ} 35.68'$ , long.  $70^{\circ} 10.67'$ , falling in 50 ft. depths on the present survey should be disregarded. The position of the sounding, whose origin is not readily ascertainable, is probably slightly in error. A 35-ft. sounding about 75 meters southward has been carried forward to the present survey from H-3677 W.D. and is adequate for charting.
- (2) The 20-and 58-ft. soundings (Chart 315) in the vicinity of lat.  $43^{\circ} 32.10'$ , long.  $70^{\circ} 09.05'$ , originate with H-403 (1853) and fall in depths of about 80 feet on the present survey. The spacing of soundings here on the prior survey was found to be faulty and the line of soundings to be controlled by very weak fixes. The soundings should probably fall about 250 meters southeastward where comparable depths were obtained on the present survey. These prior soundings, therefore, should be disregarded.
- (3) The 56-, 49-, 39 (charted as 43)-, 80-and 98-ft. soundings (Chart 315) on line between lat.  $43^{\circ} 33.14'$ , long.  $70^{\circ} 08.58'$  and lat.  $43^{\circ} 32.56'$ , long.  $70^{\circ} 08.40'$ ; originate with H-699 (separate discussion of the 39-ft. sounding below). Falling in present depths 30 to 40 feet deeper, these prior soundings are believed to be out of position and

should probably fall several hundred meters north-westward where comparable depths occur on the present survey.

The 39-ft. sounding (charted as 43) was cleared by an effective drag depth of 49 feet on H-3677 W.D. (1914) but because a split occurred nearby, a subsequent wire-drag investigation was made (Chart Letter 460, 1941) which also cleared the area by effective drag depths of 43 and 45 feet in opposite directions. From the results of the latter investigation, the doubtful 39 was arbitrarily changed and charted as 43 feet.

On the basis of the present development and the prior wire-drag investigation, these prior soundings are considered to be disproved.

- (4) The 33-ft. sounding (Chart 315) in lat.  $43^{\circ} 32.53'$ , long.  $70^{\circ} 11.00'$ , falls in present depths of 120 feet. Originating with H-403, this prior sounding was found to be misplotted and should fall about 275 meters southeastward. In its corrected position, the 33 is superseded by comparable depths on the present survey.
- (5) The 57-ft. sounding (Chart 315) in lat.  $43^{\circ} 32.46'$ , long.  $70^{\circ} 10.50'$ , originating with H-403, falls in present depths of 120 feet. This prior sounding is actually  $19\frac{1}{2}$  fms. (117 ft.) in the sounding records of H-403. Inasmuch as the corrected depth is in agreement with present depths the prior sounding should be disregarded.
- (6) The 68-ft. sounding (Chart 315) in lat.  $43^{\circ} 32.40'$ , long.  $70^{\circ} 10.30'$ , falls in present depths of 130 feet. Originating with H-699, this prior sounding is considered to be displaced in position and should actually fall about 200 meters eastward where comparable depths occur on the present survey. The prior sounding should be disregarded.
- (7) The 63-ft. sounding (Chart 315) in lat.  $43^{\circ} 32.25'$ , long.  $70^{\circ} 10.62'$ , originating with H-699, falls in present depths of about 130 feet. This prior sounding was probably recorded 10 fms. in error. Present development is adequate to disprove the 63 which should be disregarded.

- (8) The 96-ft. sounding (Chart 315) falling in present depths of 140 feet in lat.  $43^{\circ} 32.00'$ , long.  $70^{\circ} 10.12'$ , should be disregarded. Originating with H-841, this prior sounding is considered to be displaced in position and should actually fall about 200 meters eastward where comparable depths were obtained on the present survey.
- (9) The 106-ft. sounding (Chart 315) falling in present depths of 190 feet in lat.  $43^{\circ} 31.70'$ , long.  $70^{\circ} 10.70'$ , originates with H-699. Present development is considered adequate to disprove this prior depth which should be disregarded.
- (10) Two 76-ft. soundings (Chart 315) falling in present depths of 120-130 feet in the vicinity of lat.  $43^{\circ} 32.60'$ , long.  $70^{\circ} 11.60'$ , should be disregarded. Originating with H-841, these prior soundings were probably recorded 10 fms. in error. Present development is considered adequate to disprove these prior depths in their plotted position.
- (11) The 100-and 111-ft. soundings (Chart 315) in lat.  $43^{\circ} 32.40'$ , long.  $70^{\circ} 07.93'$ , and lat.  $43^{\circ} 31.87'$ , long.  $70^{\circ} 08.30'$ , respectively, originating with H-699, should be disregarded. These prior soundings falling in present depths of 140 feet were erroneously spaced on the prior survey. In their correct positions 200 meters southward, the 100-and 111-ft. soundings fall in comparable depths on the present survey.
- (12) The 54-ft. sounding (Chart 325) falling in present depths of 74 feet in lat.  $43^{\circ} 35.32'$ , long.  $70^{\circ} 09.50'$ , should be disregarded. Originating with H-403, this prior sounding falls between two fixes which are 24 minutes apart. No time is recorded for the intermediate soundings and therefore, the accuracy of their spacing is doubtful. The 54 is probably displaced in position and should fall about 200 meters westward where comparable depths were obtained on the present survey.
- (13) The 45-ft. sounding (Chart 315) falling in present depths of 64 feet in lat.  $43^{\circ} 34.32'$ , long.  $70^{\circ} 09.85'$ , should be disregarded. Originating with H-699, this prior sounding was cleared by an effective drag depth of 47 feet on H-3677 W.D. (1914). Comparable depths obtained on the present survey about 300 meters westward are adequate for charting.

- (14) The line of soundings (Chart 315) extending from the 40-ft. sounding in lat.  $43^{\circ} 32.53'$ , long.  $70^{\circ} 10.67'$ , to the 52-ft. sounding in lat.  $43^{\circ} 32.75'$ , long.  $70^{\circ} 10.10'$ , should be disregarded. Originating with H-841, this prior line of soundings (depths of 40-57 feet) falls in present depths of 70-150 feet. As the records covering this prior work are either lost or misplaced, no verification of the depths and positions is possible. However, in their plotted positions, these soundings are disproved by present depths and should be disregarded.
- (15) The 87-ft. sounding (Chart 315) in lat.  $43^{\circ} 33.72'$ , long.  $70^{\circ} 09.40'$ , falls in present depths of 150 feet. Originating with H-403, this prior sounding was probably recorded 10 fms. in error. Present development is adequate to disprove the prior depth which should be disregarded.
- (16) The 20-ft. sounding (Chart 315) in lat.  $43^{\circ} 32.47'$ , long.  $70^{\circ} 10.90'$ , originating with H-841, falls in depths of 100 feet on the present survey. This prior sounding was found to be misplotted and should actually fall about 200 meters southeastward. In its corrected position, the prior 20-ft. sounding has been carried forward to the present survey.

Although the delineation of bottom features is more complete on the present survey than on the prior surveys, twenty prior soundings have been carried forward to supplement present depths. Seven of these prior soundings represent the least depth obtained on important shoals by the intensive development on H-841 (1863). Several bottom characteristics were also carried forward from the prior surveys.

The present survey, with the indicated additions is adequate to supersede the prior surveys within the common area.

B. H-3677 W.D. (1914) 1:20,000; H-6662 W.D. (1941) 1:20,000

Except for a small area in the vicinity of Alden Rock and Corwin Rock, the above wire-drag surveys cover the area of the present survey. No conflicts exist between the effective drag depths and depths on the present survey. Discrepancies in soundings noted are as follows:

- (1) The 44-ft. sounding (Charts 315 and 325) in lat.  $43^{\circ} 35.95'$ , long.  $70^{\circ} 10.48'$ , on H-3677 W.D. falls in present depths of 80 feet. The position of this prior sounding was erroneously plotted with a questionable left angle. In its correct position, about 350 meters westward, a depth of 43 feet was obtained on the present survey. The prior sounding, therefore, should be disregarded.

- (2) The 44-ft. sounding (Chart 315) in lat.  $43^{\circ} 34.92'$ , long.  $70^{\circ} 06.88'$ , on H-3677 W.D. falls in depths of 100 ft. on the present survey. The sounding was found to be erroneously plotted and should actually fall about 300 meters south southwestward where comparable depths occur on the present survey. The prior sounding, therefore, should be disregarded.

The fifty-four soundings, which have been carried forward to the present survey from H-3677 W.D., attest to the value of wire-drag surveys in an area of so irregular bottom. Bottom characteristics were also carried forward to the present survey.

6. Comparison with Chart 231 (Latest print date 6/17/46)  
Chart 315 (Latest print date 3/29/48)  
Chart 325 (Latest print date 4/19/48)

A. Hydrography

Charted hydrography originates with the previously discussed surveys, supplemented by a few critical soundings from the present survey prior to verification and review. Charted hydrography is now superseded by the present survey.

B. Aids to Navigation

The lighted buoy (Chart 315) marking West Cod Ledge Rock in lat.  $43^{\circ} 34.27'$ , long.  $70^{\circ} 07.72'$ , and the buoy in lat.  $43^{\circ} 32.32'$ , long.  $70^{\circ} 12.60'$ , were not located on the present survey. The present survey positions of other aids to navigation are in substantial agreement with the charted aids and adequately mark the features intended.

7. Condition of Survey

- a. The sounding records are complete except for the absence of soundings in lat.  $43^{\circ} 33.8'$ , long.  $70^{\circ} 09.2'$ . A small "holiday" resulted in this deep because of failure to shift the 808 Fathometer from the foot scale to the fathom scale.
- b. The Descriptive Report is particularly comprehensive.
- c. The smooth plotting was neat and carefully done. The soundings (pos. 66k-114k, blue, vicinity of lat.  $43^{\circ} 35'$ , long.  $70^{\circ} 06'$ ) which are discussed in the Processing Office Addendum have been plotted on the smooth sheet in this office. The use of this work was considered justified after comparison with about thirty crosslines and other development on the present survey.

d. As noted in the Descriptive Report, crosslines were not run over the greater part of the surveyed area. Crosslines amount to about three percent of the total sounding lines.

8. Compliance with Project Instructions

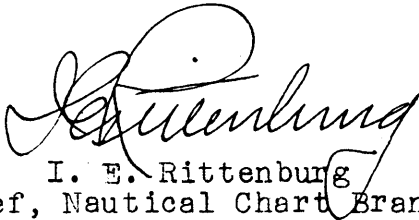
The survey adequately complies with the Project Instructions except as noted under paragraph 7d above.

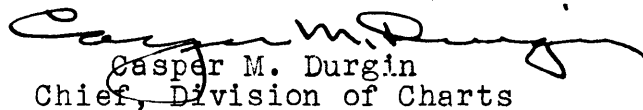
9. Additional Field Work

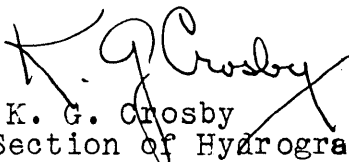
With the retention of seventy-four prior soundings, this survey is considered basic and no additional work is recommended.

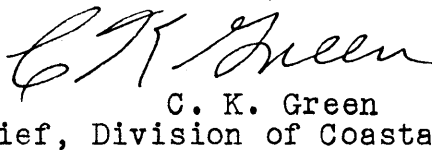
About half the area in lat.  $43^{\circ} 34.5'$ , long.  $70^{\circ} 05.0'$ , covered by sounding lines spaced 200 meters apart, will be augmented by overlapping sounding lines from the junction with H-7147 (1946) on the east. The shoal indications appearing in this triangular area, as well as elsewhere on the survey would require further investigation had not wire drag surveys been previously accomplished.

Examined and approved:

  
I. E. Rittenburg  
Chief, Nautical Chart Branch

  
Casper M. Durgin  
Chief, Division of Charts

  
K. G. Crosby  
Chief, Section of Hydrography

  
C. K. Green  
Chief, Division of Coastal Surveys

# NAUTICAL CHARTS BRANCH

SURVEY NO. H-7149

Reviewed 12-1-48

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
1-13-48	315	Richardson	<del>Before</del> <u>After</u> Verification and Review Examined for shoal soundings. <del>Before</del> <u>After</u> Verification and Review
3/25/48	325	J.G. Mann	<del>Before</del> <u>After</u> Verification and Review Partially applied! added a few soundings. <del>Before</del> <u>After</u> Verification and Review
4/23/48	1204 Reconst.	G.H.E. & H.E.M	Partially Applied <del>Before</del> <u>After</u> Verification and Review
28 June 48	50	Nichols	<del>Before</del> <u>After</u> Verification and Review Part. applied Show ch. 1204
Feb 9 1949	325	H.F. Stegman	<del>Before</del> <u>After</u> Verification and Review Completely applied
Feb 14 1949	315	H.F. Stegman	<del>Before</del> <u>After</u> Verification and Review Completely applied
May 1 '49	1204	H.F. Stegman	<del>Before</del> <u>After</u> Verification and Review Completely applied
May 27 '49	231	H.F. Stegman	<del>Before</del> <u>After</u> Verification and Review Completely applied
July 6 '49	1204	H.F. Stegman	After V & R Partially applied - (Critical changes only, pending reconstruction)
7/31/50	1106	Riseman	After V & R. Part. appl. show 1204
Nov 53	1000	H.F. Stegman	" " " " " 1106
Aug 55	1000 1000L	Nichols	" " complete appl.
11-19-62	1106	G.R. Johnson	Fully App'd After V & R through cht 1204
1-29-68	325	G.R. Johnson	Added Hydro in area of limit extension

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.