

7127

Diag'd. on Diag. Ch. No. 1205 & 1206 (sheet 2) \$ 10.00

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. LY-4246 Office No. H-7127

LOCALITY

State MAINE

General locality COAST OF MAINE

Locality ISLE OF SHOALS

1947

CHIEF OF PARTY

Jack C. Sammons

LIBRARY & ARCHIVES

DATE JUL 20 1948

7127

This survey is incomplete.  
Review when additional  
work is accomplished in  
uninked areas.

R.H. Carstens

1/27/49

Suggest that title be changed  
to  
Gulf of Maine.

(Isles of Shoals are partly in  
New Hampshire)

L.H.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

H7127

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-7127

Field No. LY 4246

State Maine

General locality Coast of Maine

Locality Isle of Shoals

Scale 1:40,000 Date of survey 29 May 1947 to 26 July 1947

Instructions dated Original Instructions 8 March 1940, Supp. Inst. 27 March 1946

Vessel Ship LYDONIA

Chief of party Jack C. Sammons

Surveyed by Ship's Officers

Soundings taken by fathometer, graphic recorder, ~~hand level, etc.~~

Fathograms scaled by Norfolk Processing Office

Fathograms checked by Norfolk Processing Office

Protracted by A. G. Atwill

Soundings penciled by A. G. Atwill

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

REMARKS: This report covers the work done during 1947. This was originally additional work on sheet H-7148, however it was plotted on a separate smooth sheet and assigned the number H-7127

DESCRIPTIVE REPORT

To Accompany

Hydrographic Survey Sheet H-<sup>7127</sup>~~7148~~ (Field No. LY-4246)

Project HT-248

Ship LYDONIA

Jack C. Sammons, Comdg.

1947

PROJECT:

This survey was accomplished in accordance with Original Instructions dated 8 March 1940 and Supplemental Instructions 27 March 1946, Project No. HT-248.

SURVEY LIMITS AND DATES:

This survey is a continuation of Field Sheet No. LY-4246 began in 1946. It completes the area on that sheet between Latitude  $42^{\circ} 59.5'$  and  $43^{\circ} 09.25'$  and between Longitude  $69^{\circ} 53.0'$  and  $70^{\circ} 34.0'$ . It joins Survey H-6564<sub>(1940)</sub> on the east and H6706<sub>(1941)</sub> on the south, H-7148<sub>(1946)</sub> on the north, H-6708<sub>(1944)</sub> and H-7140<sub>(1947)</sub>.

Field work on the above portion of the sheet began on 29 May 1947 and ended on 26 July 1947.

VESSEL AND EQUIPMENT:

This survey was made by the Ship LYDONIA using the Dorsey Fathometer, Type 3, and the 808 Depth Recorder. The latter was kept in operation continually as a check on shoals and pinnacles and to fill in soundings when the Dorsey Fathometer failed.

*Processing office used 808 sds  
in preference to Dorsey sds.*

*Fathograms not  
received for several  
days.*

TIDE AND CURRENT STATIONS:

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

Tide reducers for the boat sheet were obtained from the predicted tides at Isle of Shoals, N. H. No correction was applied to the predictions.

Final tide reducers and time difference (if any) should be obtained from the Division of Tides and Currents.

SMOOTH SHEET:

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

(Con'td)

CONTROL STATIONS:

A list of signals and the geographic positions of the two SHORAN Stations used on the portion of the work accomplished in 1947 are attached herewith.

The position of SHORAN Station "ROCK" is *identical* identified with triangulation station "Pool Hill, 1849, 1940".

The position of SHORAN Station "GULL" was determined from the distance and direction to triangulation station "Aero Beacon Me. 1940". The antenna at this station was mounted on this aero beacon, but slightly offset from its center.

SHORELINE AND TOPOGRAPHY:

None

SOUNDINGS:

Most of the soundings on this sheet were obtained with the Dorsey Type 3 Fathometer. The 808 Depth Recorders Nos. 75 and 76 were in constant use to serve as a check on shoals and to fill in soundings when the Dorsey failed. Standard methods for obtaining the fathometer soundings were employed.

The Dorsey Type 3 Fathometer on the LYDONIA is old and worn and was not in operating condition at various times. It was quite difficult for even an experienced fathometer operator to obtain reliable soundings. This difficulty was even more pronounced in depths greater than 300 feet, especially when it was rough or where the bottom was soft. The 808 depth recorders also failed to give good graphs where the bottom was soft. In spite of all that could be done with the fathometer equipment on board, it is possible that some of the deeper soundings on this sheet are in error. In deep waters where there is a discrepancy between the Dorsey and the 808 recorder, it is recommended that preference be given to the graphic record.

During the latter part of the work on this sheet, the Dorsey Fathometer failed completely and the 808 recorder was used entirely. To facilitate plotting on the boat sheet the depths were recorded directly in feet although the soundings were obtained on the fathom scale.

Abstracts of temperature and salinity corrections, instrumental error and squat, have been furnished to the Hydrographic Section, Southeastern District Office.

Attention is directed to the fact that the transceiver depths for the Dorsey Fathometer and the 808 Recorder are different. Consequently the corrections to soundings for the draft of the vessel will be different for the two types of fathometers.

(Cont'd.)

CONTROL OF HYDROGRAPHY:

Practically all the hydrography on this portion of the sheet was controlled by SHORAN. Three point fixes were used when the SHORAN did not furnish sufficiently strong control.

SHORAN Indicator No. 898 was used almost exclusively. Indicator No. 900 was used at short intervals when No. 898 was out of order. The indicator in use was noted in the sounding volume. Zero settings for both indicators were determined by making simultaneous observations with SHORAN and sextant fixes while the ship was stopped. The position of the ship was computed from the sextant angles and the true distance from the ship to each SHORAN station determined. A comparison of the true distances and SHORAN distances gave the correct zero settings for the indicators.

*Records show  
898 used only*

A table of zero settings is attached herewith. All computations made in connection with SHORAN tests are being forwarded to the South-eastern District Office.

For plotting SHORAN positions on the boat sheet, distance circles at 2 statute miles spacing were drawn on the sheet in a different color for each station. Distances falling between two adjacent circles were scaled by use of the "Odyssey" Protractor.

The actual zero readings for the indicator in use were made every hour and recorded in the sounding volume. While slight fluctuations were noticed, the variations were not of sufficient amount to warrant applying the corrections on the boat sheet. For smooth sheet plotting, the corrections as determined by the hourly zero readings should be applied to all SHORAN Readings. (The corrections referred to are differences between correct zero settings as determined by tests and the actual hourly zero readings.)

ADEQUACY OF SURVEY:

The survey is considered adequate. No holidays exist and depth curves are sufficiently delineated. No launch work was done in the shoal areas in the vicinity of Boon Island.

CROSS LINES:

A sufficient number of cross lines were run to check the regular system of sounding lines and comply with the Instructions. Crossings were in general in satisfactory agreement.

COMPARISON WITH PRIOR SURVEYS:

This survey makes a satisfactory junction with former Surveys H-6564 and 6706. Although some differences were noted between this survey and the former ones, they are thought to be due to the irregular bottom.

(Cont'd.)

COMPARISON WITH PRIOR SURVEYS: (CONTINUED)

None of the differences are great enough to cause concern.

COMPARISON WITH CHARTS:

Several isolated soundings on Chart 1205 do not agree with depths determined on this survey. They are enumerated below:

- 1. Charted depth of 54 feet on Chart 1205 in Lat. 43° 08.3', Long. 70° 29.7'. A shoaler depth of 49 feet was obtained. 48 ✓ (808 506)
- 2. Charted depth of 44 feet on Chart 1205 in Lat. 43° 08.4', Long. 70° 31.5' was not verified. Least depth found was 55 feet. 49 ✓ (808 506)
- 3. Charted depth of 52 feet on Chart 1205 in Lat. 43° 07.9', Long. 70° 32.7' was verified with a least depth of 47 feet being found. 46 ✓ (808 506)
- 4. Charted depth of 78 feet on Chart 1205 in Lat. 43° 06.5', Long. 70° 32.6' was not verified. The least depth found was 84 feet. 83 ✓ (808 506) *There is a 72 in the vicinity on H. 7127*
- 5. Charted depth of 114 feet on Chart 1205 in Lat. 43° 04.0', Long. 70° 32.5' was not verified. The least depth found was 135 feet. 134
- 6. Charted depth of 99 feet on Chart 1205 in Lat. 43° 04.1', Long. 70° 31.3' was verified with a least depth of 89 feet being found. 87 90 (808 506 124)
- 7. Charted depth of 66 feet on Chart 1205 in Lat. 43° 08.3', Long. 70° 27.2' was not verified. A least depth of 99 feet was found. 89 ✓ (808 506)
- 8. Charted depth of 54 feet on Chart 1205 in Lat. 43° 05.2', Long. 70° 33.9' was verified with a least depth of 34 feet found. 32 ✓ (808 506)
- 9. Charted depth of 75 feet on Chart 1205 in Lat. 43° 05.9', Long. 70° 33.0' was not verified. The least depth found was 94 feet. 192
- 10. Charted depth of 25 feet on Chart 1205 in Lat. 43° 06.8', Long. 70° 30.8' was not verified. The least depth found was 37 feet. 32 ✓ (808 506)
- 11. Charted depths of 28 and 26 feet on Chart 1205 in Lat. 43° 06.2', Long. 70° 28.8' were not verified. The least depth found in this vicinity was 38 feet. 48 ✓ (808 506)

(Cont'd.)

The 38 referred to is a 138' plotted on B.S. at pos. 12.L

The area in which most of the above discrepancies appear is exceedingly rough and irregular and it is possible that the charted depths exist. It would be extremely difficult to verify them by any other means than by wire drag.

12. The charted reported sounding of 150 feet on Chart 1106 in Lat.  $43^{\circ} 01.7'$ , Long.  $70^{\circ} 30.3'$  was not verified although a least depth of <sup>176</sup> ~~179~~ feet was found on this wreck. *No mention of wreck in records*
13. The reported sounding of 35 feet on Chart 1205 and 1106 in Lat.  $43^{\circ} 07.75'$ , Long.  $70^{\circ} 00.0'$  was not found, and since no indication of a shoal was found on Jeffrey's Ledge, it is believed that the reported sounding does not exist. This survey indicated that the Ledge is charted about 2 miles eastward of its correct location and the least depth found on the entire Ledge was <sup>146</sup> ~~145~~ feet in Lat.  $43^{\circ} 01.4'$ , Long.  $70^{\circ} 03.3'$ .

DANGERS AND SHOALS:

No additional dangers were found on this survey.

COAST PILOT INFORMATION:

None

AIDS TO NAVIGATION:

The position of the whistle buoy "2JL" on Jeffrey's Ledge was determined. It's new position is in Lat.  $43^{\circ} 00.9'$ , Long.  $70^{\circ} 02.9'$ .

Remaining subheadings are not applicable.

Respectfully submitted,

*P. L. Bernstein*  
P. L. Bernstein,  
Lt. Comdr., C&GS.

APPROVED AND FORWARDED:

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



SIGNAL STATIONS USED ON SHEET H-<sup>7127</sup>7148 (LY-4246)

SHORAN STATIONS

GULL (Lat. 43° 13' 18.832")  
(Long. 70° 36' 40.089")

*slightly off Δ AERO BEACON 1940*

ROCK (Lat. 42° 39' 24.101")  
(Long. 70° 38' 05.797")

*OFF sheet = Δ POOL HILL 1849, 1940*

MEN (Lat. 43° <sup>13'</sup>33' 51.315")  
(Long. 70° <sup>41'</sup>11' 57.027")  
(MEN was former SHORAN Station)

TRIANGULATION STATIONS

NED - Cape Neddick L. H. 1903

BACK - Whaleback L. H. 1878

BOON - Boon Id. L. H. 1900, 03

ZERO SETTINGS FOR SHORAN INDICATORS

SHIP LYDONIA

Jack C. Sammons, Comdg.

PROJECT HT-248

1947

INDICATOR NO. 898

GULL	ROCK
99.818	99.818

INDICATOR NO. 900

99.820	99.820
--------	--------

The above values were obtained from a comparison of sextant fixes and Shoran distances and also from an analysis of the minimum Shoran distances obtained when the ship was on range between Gull and Rock. These minimum Shoran distances were obtained by determining the minimum point on the parabola as determined from observations taken before and after crossing the range. The sum of the two readings were compared with the true distance between Gull and Rock. From this comparison a mean value of the true zero setting was determined that would give the true distance between the two stations. This value was in close agreement with that determined by comparison of sextant fixes and Shoran distances.

STATISTICS SHEET H-7127 (LY 4246)

DATE 1947	DAY	ORIGINAL DAY LETTER	VOL	POS	STAT MILES SDG	STAT MILES TOTAL
5/29	A	EA	1	216	78.0	100.8
5/30	B	FA	1 & 2	199	113.0	127.0
5/31	C	GA	2 & 3	234	114.6	128.0
6/1	D	HA	3 & 4	199	87.5	104.8
6/2	E	JA	4 & 5	176	98.9	117.4
6/3	F	K A	5	44	20.2	29.4
6/10	G	LA	5 & 6	224	104.3	128.6
6/11	H	MA	6 & 7	173	67.4	81.4
6/12	J	NA	7 & 8	227	105.0	119.8
6/13	K	PA	8	207	80.9	95.8
6/14	L	QA	9	221	95.8	106.9
6/15	M	RA	9 & 10	258	114.0	131.4
6/16	N	SA	10 & 11	267	117.1	125.7
6/17	P	TA	11 & 12	273	113.1	123.4
6/18	Q	UA	12	33	15.1	24.5
6/23	R	VA	13	13	5.5	12.4
6/24	S	WA	13	233	107.9	127.0
6/26	T	XA	14	196	87.9	107.2
6/27	U	YA	14 & 15	239	123.7	147.7
6/28	V	Z	15 & 16	239	111.0	116.6
7/26	W	AB	16 & 17	89	39.8	51.7
TOTALS				3960	1800.7	2107.5

AREA SQ. STAT. MILES 373

ADDENDUM  
To accompany

HYDROGRAPHIC SMOOTH SHEET NO. H-7127(Field No. Ly-4246)

This sheet was originally a part of survey H-7148 and the field work was executed on that boat sheet, however, a new registry number was assigned by the Washington Office and the smooth sheet was plotted as a separate survey.

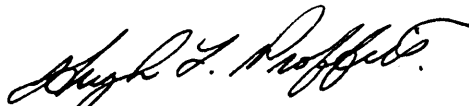
DAY LETTERS In order to simplify the processing and plotting of this sheet the day letters were changed on all data except the boat sheet. EA-day was changed to A-day, etc.

SOUNDINGS As the Dorsey fathometer was apparently giving erratic results, 808-J fathometer soundings were used exclusively where fathograms were available. 808-J fathograms were not furnished for B,C,D,E, & F days so Dorsey soundings had to be used in lieu of better data. With some exceptions, Dorsey soundings were entered in the original sounding volumes by the field party. These were processed and the reduced soundings entered in the column marked "Field". When the 808-J fathometer was used in conjunction with the Dorsey, the soundings were scaled into duplicate volumes and the reduced soundings transferred to the original volumes in the "Office" column. By this means, a comparison of the individual soundings was made. There were variations between the Dorsey and 808-J soundings of from 5 to more than 40 feet.

When the soundings were entered on the smooth sheet, the 808-J crossings were found to be in excellent agreement and general hydrography in these areas was consistent. Where Dorsey soundings crossed 808-J soundings the variations were extreme, and followed no consistent pattern, other than the fact that Dorsey soundings were generally deeper.

Discrepancies in Dorsey crossing were too numerous to tabulate, however, full and copious notes were made in the sounding volumes concerning these.


Respectfully submitted,



Hugh L. Proffitt  
Engr. Draftsman

Norfolk, Va.  
July 12, 1948

Approved and Forwarded



George L. Anderson  
supervisor SED

GEOGRAPHIC NAMES

Survey No.

**H7127**

Name on Survey	A	B	C	D	E	F	G	H	K	
<u>Maine</u>									USGB	1
<u>Gulf of Maine</u>										2
<u>Isles of Shoals</u>										3
<u>Boon Island</u>										4
										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
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										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

Names underlined in red are approved. 7/28/48 L. Heck

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. .... **H7127**

Records accompanying survey:

Boat sheets 1....; sounding vols. 24....; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls 2 envelopes (16 days)  
 special reports, etc. ....  
 .....

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

Number of positions on sheet		3960
		.....
Number of positions checked		52
		.....
Number of positions revised		5
		.....
Number of soundings revised (refers to depth only)		2130 (phase correction)
		.....
Number of soundings erroneously spaced		—
		.....
Number of signals erroneously plotted or transferred		—
		.....
Topographic details	Time	—
		.....
Junctions	Time	40
		.....
Verification of soundings from graphic record	Time	80
		.....

Verification by *Roy E. Elkins*..... Total time 403 Date 11-26-48

Reviewed by..... Time ..... Date .....

VERIFIER'S REPORT OF HYDROGRAPHIC SURVEY NO. H- **H7127**

The verifier should deal with the present hydrographic survey only, as the reviewer considers its relation to previous surveys and published charts. He should be thoroughly familiar with Chapters 3, 7 and 9 of the Hydrographic Manual.

1. The descriptive report was consulted and appropriate notes were made in soft pencil regarding action taken. ✓
2. Soundings originating with the survey and mentioned in the descriptive report have been verified, including latitude and longitude. ✓
3. All reference to survey sheets mentioned in the descriptive report include the registry number and year. ✓
4. Geographic names of hydrographic features if on sheet are in slanting lettering and of topographic features in vertical lettering. ✓
5. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action was taken. ✓
6. All positions verified instrumentally were check marked in the sounding records. ✓
7. All critical soundings are clear and legible and are a little larger than the adjacent soundings. ✓
8. The metal protractor has been checked within the last three months. ✓
9. The protracting and plotting of all bad crossings were verified. ✓
10. All detached positions locating critical soundings, rocks or buoys were verified. *none* ✓
11. The boat sheet was compared with the smooth sheet. ✓

12. The spacing of soundings as recorded in the records was closely followed. ✓
13. The bottom characteristics were shown on outstanding shoals. *very few* X
14. The reduction and plotting of doubtful soundings were checked. ✓
15. The transfer of contemporary topographic information was carefully examined. X
16. All junctions were transferred and overlapping curves made identical. ✓
17. The notation "JOINS H- (19--)" was added in ink for all contemporary adjoining or overlapping sheets now registered. Those not verified are shown in pencil.  
*H-7148 (1946)*  
*H-6564 (1940)*
18. The depth curves have been inspected before inking. X
19. All triangulation stations and transfer of topographic and hydrographic signals were checked. ✓
20. Heights of rocks were checked against range of tide. *now*
21. Rocks transferred from topographic surveys have a dotted curve where shown thereon. Rocks located accurately by hydrographer are encircled by dotted red curve. *now*
22. Unnecessary pencil notes have been removed. ✓
23. Objects on which signals are located and which fall outside of the low water line have been described on the sheet. *now*
24. The low water line and delineation of shoal areas have been properly shown. *now*
25. Degree and minutes values and symbols have been checked. ✓
26. Questionable soundings have been checked on the fathograms. ✓



27. Source of shoreline and signals (when not given in report).  
*ALL SIGNALS ARE ΔS.*
28. All notes on sheet are in accordance with figure 171 in the Hydrographic Manual.
29. All aids located, with those on contemporary topographic sheets, have been shown on survey.  
*only one on sheet "Buoy 25L"*
30. Depth curves were satisfactory except as follows:  
*In areas developed with the Dorney III.*
31. Sounding line crossings were satisfactory except as follows;  
*Differences at crossings are discussed in processing office report. also see attached notes*
32. Junctions with contemporary surveys were satisfactory except as follows:  
*portions of H-7148, H-6564-2, H-7140 & H-7608.  
see attached notes.*
33. Condition of sounding records was satisfactory except as follows:  
*Improper phasing correction. see attached note  
Feed locks, see attached notes.*
34. The protracting was satisfactory except as follows:  
*very good*
35. The field plotting of soundings was satisfactory except as follows:  
*very good.*
36. Notes to reviewer:  
*misc. notes on back of page*

Verified by

Roy E. Elkins

Date

11-26-48

Misc notes

1. graphic comparison 808-Dorsey Vol 5 p52
2. Only section of P scale Vol 13 p45
3. Sketch of Super moved Vol 14 p50

4 Curvas

30 gr	270 br	540 viol
60 y/	300 rd	570 br
120 bl	330 br	600 gr
150 br	360 bl	630 br
180 viol	390 br	660 ?
210 br	420 gr	690 br
	450 br	720 ?
	480 rd	
	510 br	

condition of soundings were satisfactory except as follows:

5. radicans and with lithogram

condition of soundings records was satisfactory except as follows:

soundings with contemporarily surveys were satisfactory

soundings line crossings were satisfactory except as follows:

depth curves were satisfactory except as follows:

depths have been shown on survey. All depths located with those on contemporarily hydrographic

the hydrographic manual. All notes on sheet are in accordance with figure 1A in

source of sounding and signals (when not given in report).

## Crossing Discrepancies

Sheet #31

As the descriptive report and the Processing Office report both point out considerable conflict, the following classification was used in making soundings.

1<sup>st</sup> Sections of lines were inked on which Dorsey & BOB were in general agreement within 6 feet.

2<sup>nd</sup> An examination of the remaining lines indicated that the remaining BOB soundings could be accepted and inked regardless of the difference with simultaneous Dorsey soundings or conflict with Dorsey cross lines.

3<sup>rd</sup> The remaining pencil soundings, all being Dorsey were examined. No conflict was noticed in the northwest section of the sheet, the midwestern section, or on Jeffery Ledge. Considerable conflict was seen in deeper areas to either side of the ledge.

However, within these areas of extreme conflict, there are crossings and sections of Dorsey lines that are in apparent agreement with BOB lines. The conflict is definitely of an erratic nature, that may be seen in a more positive form by examining simultaneous soundings.

Between Lat.  $43^{\circ}02'$  to  $06'$ , at long  $70^{\circ}20'$  the difference of 20 feet decreases inshore to  $70^{\circ}28'$ , where no conflict can be detected. The lines extending to the western limit of the sheet may be entirely free of

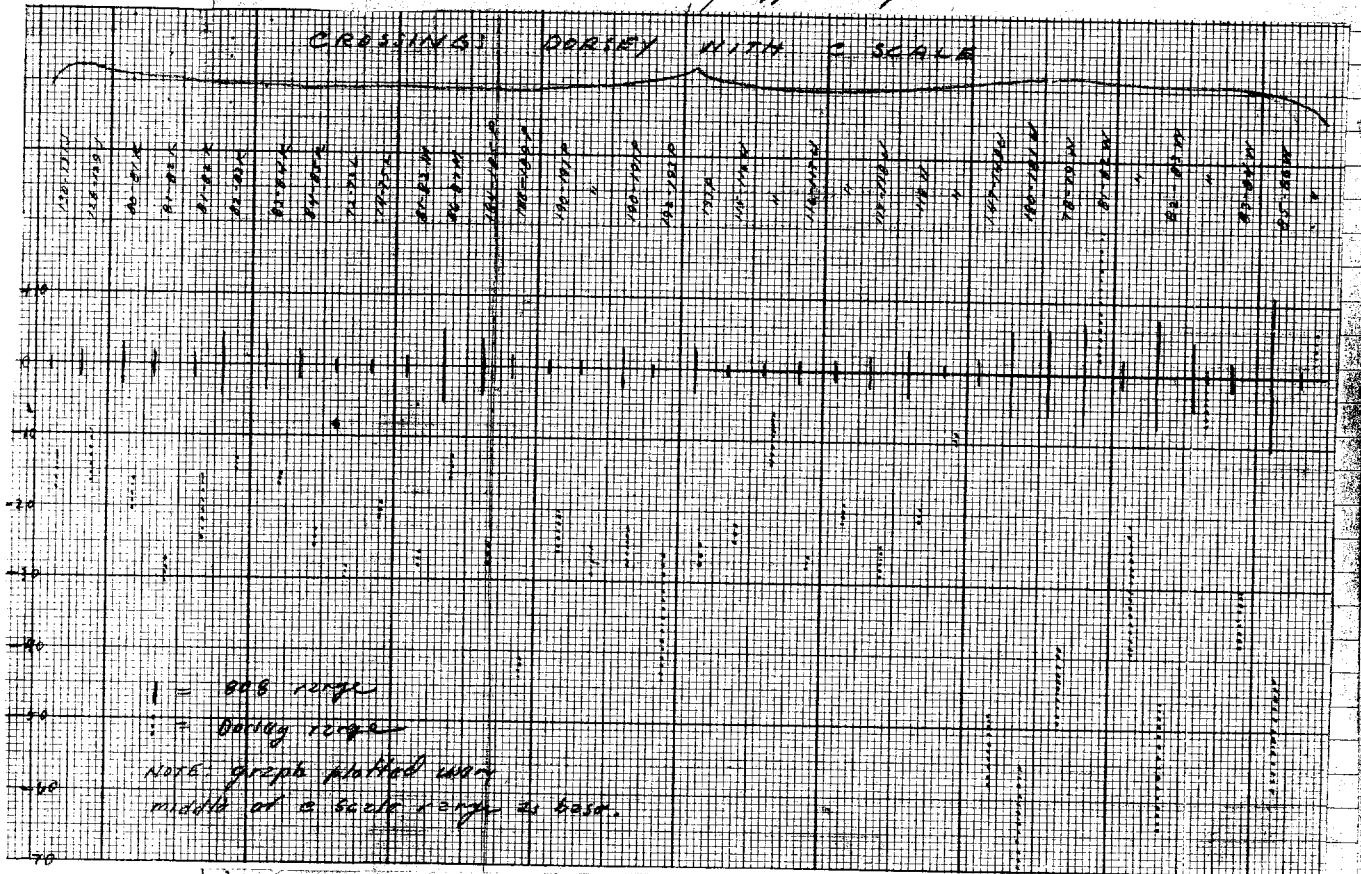
the erratic effect. On the other hand, the conflict may be absorbed in the ruggedness of the bottom.

The Dorsey soundings in the northwest section had been inked when it was decided to leave the remaining <sup>Dorsey</sup> soundings in pencil for further consideration.

Ham #31

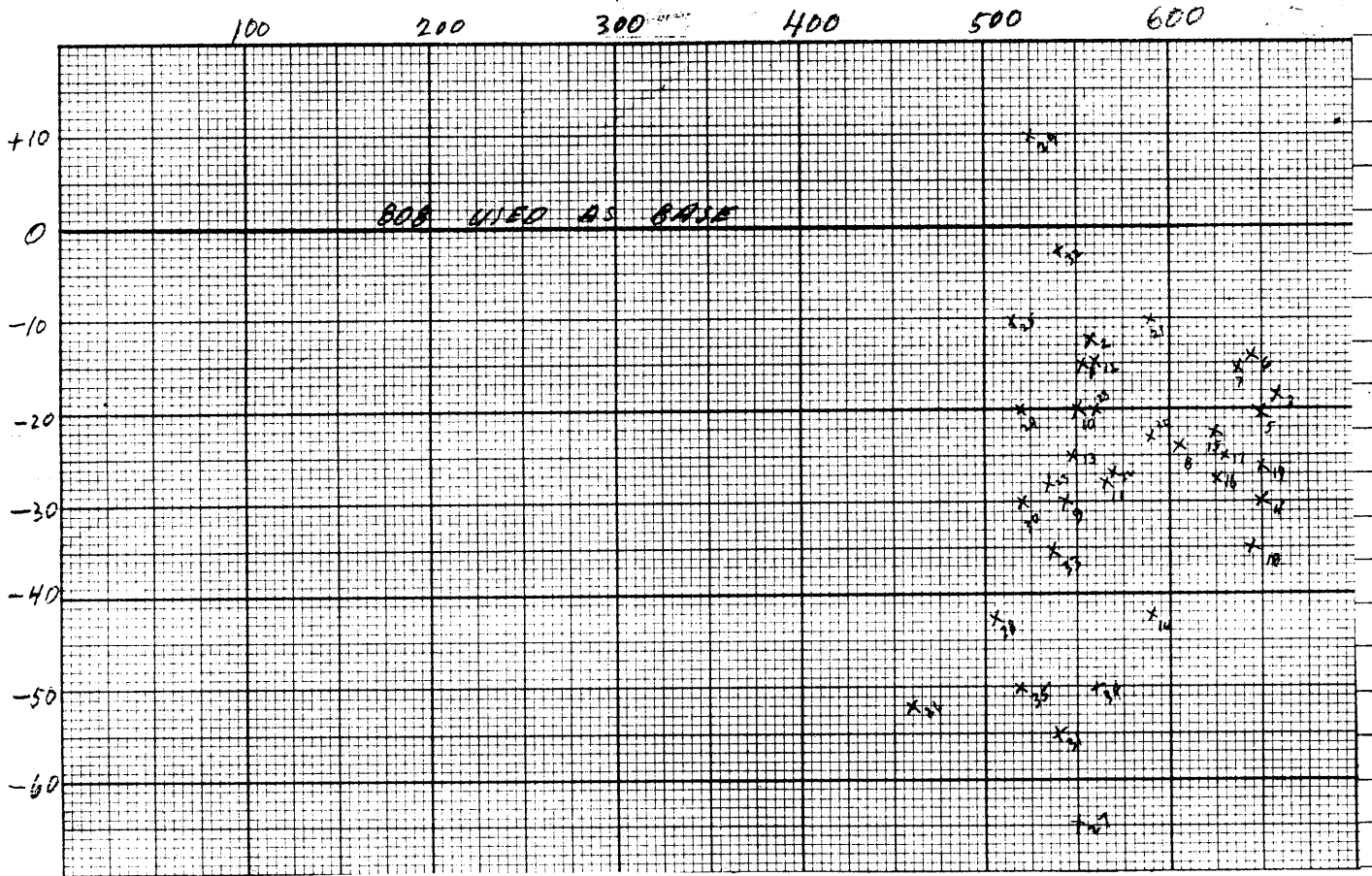
CROSSING DISCREPANCIES

The graph below shows the extent of conflict in the sounding lines at crossings, as mentioned in the Processing Office report.

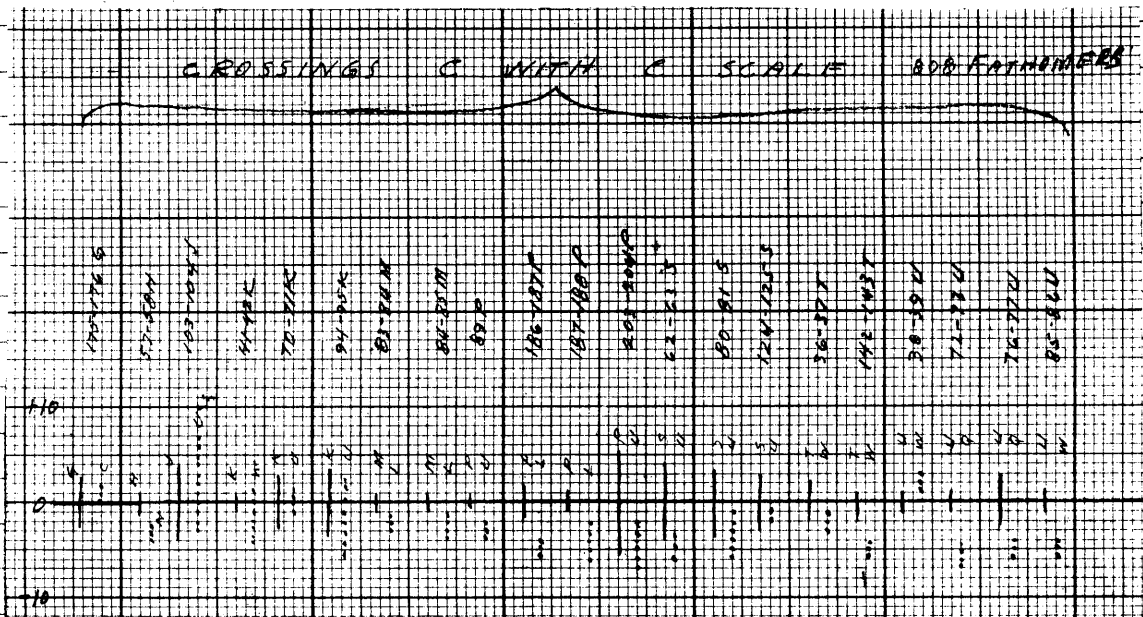


The graph on the next page was plotted from the same values, but the differences are plotted at respective depths.

# COMPARISON DORSEY WITH BOB AT GRO.



The following graph shows the agreement that may be expected in these depths.



JUNCTIONS

H-7148 (1946) A junction was made along parallel  $43^{\circ}09'$ , transferring the random lines of each to the other sheet. The corners were not inked on these random lines if they confuse the line of junction.  
~~The junction is good except between long  $69^{\circ}58'$  to  $69^{\circ}59'$  and  $70^{\circ}05'$  to  $70^{\circ}21'$ .~~

H-6564-2 (1940) Some of the lines of H-6564 are in good agreement with those of H-7127 while others are in conflict by as much as 20 feet. A butt junction was made.

H-7140 (1947) not verified. The junction is good except for a short section.

not verified by H-7140

H-6706 (1941) & H-6708 (1941) a junction was not made. These sheets are to be used as supplemental material. A comparison with H-6708 indicates that an satisfactory junction can be made ~~and~~ with <sup>H-6706</sup> the exception of "E" day lines on H-6704, which seem to be about 10 feet too deep.

H-7127  
Holiday along junction  
with H-7148

•  $\phi$  43-10 N  
   $\lambda$  70-07 W

Reviewer's attention is  
called to above - also  
there is a blank area  
west of Born V ledge - in  
the area apparently not required  
to be resurveyed in original  
instructions - H-667 and  
other old sheets do not cover  
this adequately.

It is thought that <sup>they may</sup> you might  
wish to call for addl work in  
above areas.

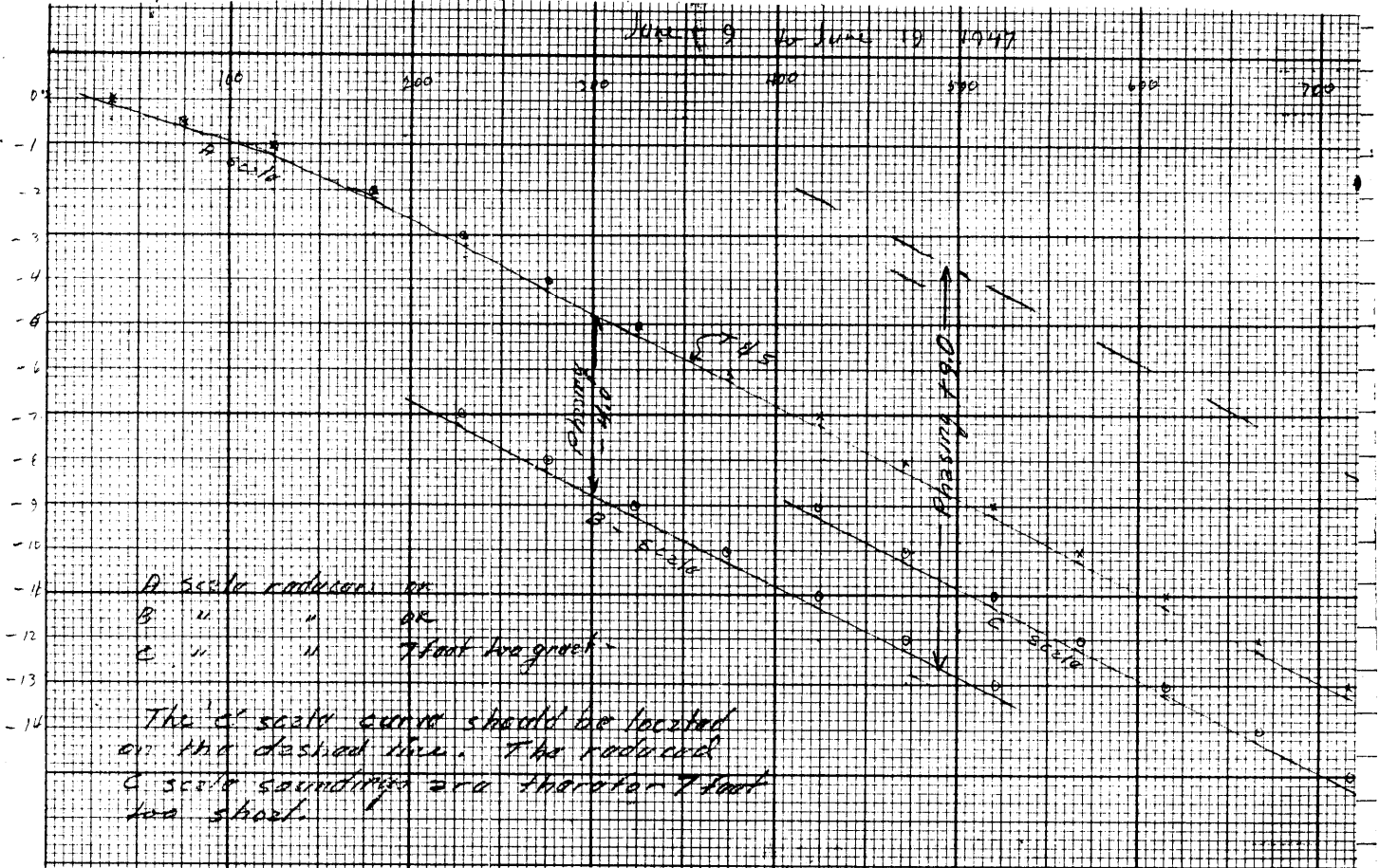
← H-7127



Hom #33

## PHASING

As the bathograms show a difference of +2.0 feet in going from "B" to "C" scales, the correction of +2.0 feet used in the reducers is to be questioned.

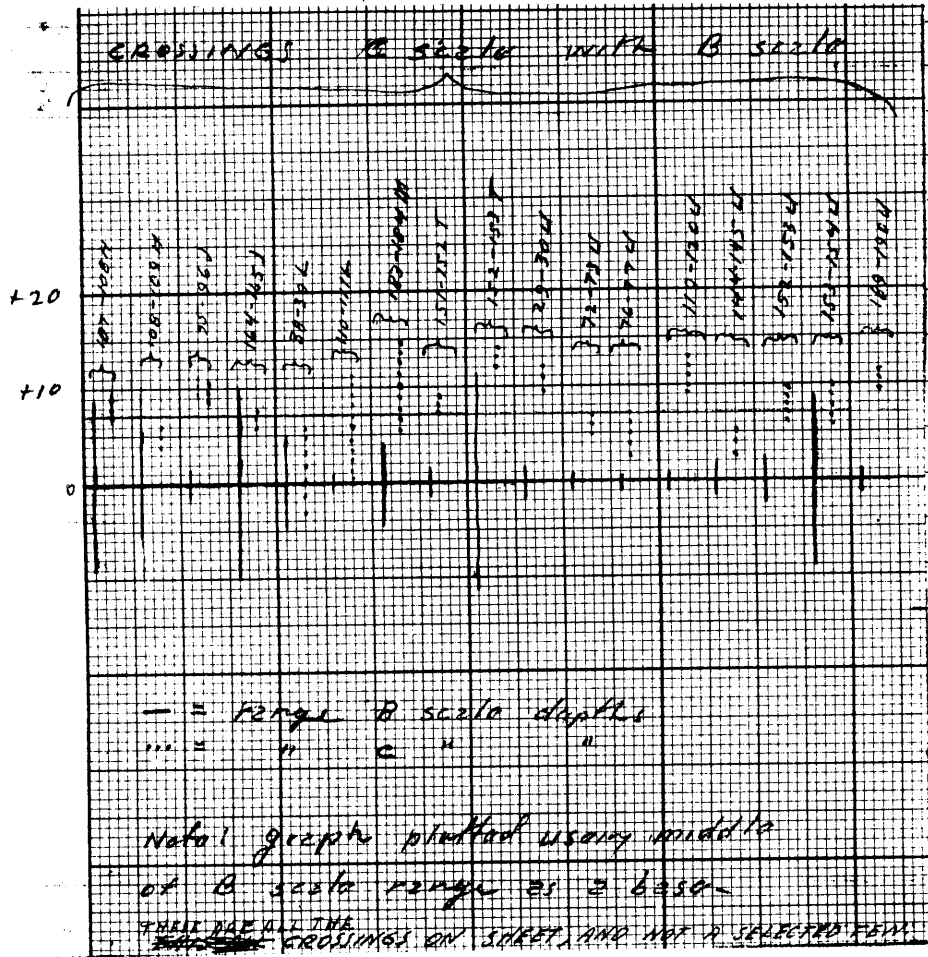


In order to test the need for the addition of +7.0 feet to the soundings of the "C" scale, two sets of comparisons were made.

1. Comparison with Dorsey soundings at phase change: About a fourth of the values obtained indicated that a +7.0 ft. correction was needed. Another fourth indicated that no correction was necessary, and the remaining

half were too erratic to use. Therefore nothing conclusive could be proved by comparison with Dorsey soundings.

2. Comparison of "C" scale crossings with "B" scale: This definitely indicates that a plus correction of about 7.0 feet is needed to bring "C" scale soundings into the plane of "B" scale.



The +2.0 used in reducers originated from a comparison made Sept. 7, 1947 (H-7140), one month after completing and four months after starting H-7127.

The verifier applied corrections phase corrections as seemed proper, based on individual conditions.

## FEED BACK

The feedback traces (false initial) appearing on the B scale records at 56.0 fms. for the greater part of the survey; but at times the trace comes in anywhere between 55.5 and 57.0 fms. On one occasion it dropped to 58.8 (23-37K), about 18 feet below its normal position of 56.0. Crossings indicate that this section of the line is about 18.0 feet too deep.

Crossings on another line, 58-67 P, with feedback trace at 56.9, indicate need for a correction. At this point it was seen that the effect of feedback needs more study.

All sections of the B scale which varied from 56.0 were traced on an overlay in order to examine the crossings.

No consistent difference was found. At many crossings, the application of the indicated feedback correction would create a decided conflict. Phase changes indicated little or nothing. Jumps were noted in the feedback trace without corresponding jumps in the bottom profile, which eliminates the possibility of either improper phasing or gain as the source of trouble. It was decided to assume that the displaced feedback did not affect depths as a general rule; while at times it may be an indication of either, improper phasing or some other influence.

Only line 23-37K was changed.

# MEMORANDUM

## IMMEDIATE ATTENTION

SURVEY  
DESCRIPTIVE REPORT  
PHOTOSTAT OF

} No. H **K7127**  
No. T

{ received  
registered  
verified  
reviewed  
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
83	<i>sd</i>	<i>sd</i>	<i>This sheet has been app'd. to Cpt. 1206 as an advance edition for use of Navy Submarine Exercises</i>
88			
90			

RETURN TO

82	
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*Office Memorandum* • UNITED STATES GOVERNMENT

TO : Chief of Coastal Surveys  
FROM : Chief, Division of Charts  
SUBJECT: Resurvey of portions of H-7127 (1947) in the Gulf of Maine

DATE: January 27, 1949

During the verification of H-7127 it was found impossible to reconcile the differences between soundings taken with the Dorsey fathometer and soundings taken simultaneously with the 808 fathometer. Differences varied and were as great as 40 ft. in some places. As noted in the Descriptive Report, page 2, the Dorsey fathometer was old and worn and toward the end of the survey failed completely.

The 808 fathometer soundings have been accepted as showing the correct depth and have been inked on the smooth sheet. The soundings taken with the Dorsey fathometer are generally too erratic and unreliable to be inked. Inasmuch as soundings on about five days were taken solely with this fathometer, the uninked area is quite appreciable.

It is recommended that when equipment for offshore hydrography is again available on the East Coast, sounding lines be rerun in these uninked areas. Attention is directed also to the holiday in Lat. 48° 10', Long. 70° 07', between H-7127 and H-7148, resulting from the rejection of Dorsey soundings on H-7148.

This survey is being held in abeyance until additional work has been accomplished.

Chief, Division of Charts

Additional work on  
Esp 77021 dated Oct 69

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RHC

839

Form 712  
DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY  
Rev. June 1937

## TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

12 August 1948

Division of Charts: R. H. Carstens

Plane of reference approved in  
24 volumes of sounding records for

HYDROGRAPHIC SHEET 7127

Locality - Coast of Maine

Chief of Party: J. C. Sammons in 1947  
Plane of reference is mean low water, reading  
3.6 ft. on tide staff at Portland, Maine  
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.~~

