

8163

Diag. Cht. No. 1205-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. PK-05253 Office No. H-8163

LOCALITY

State Maine

General locality Gulf of Maine

Locality Cape Porpoise Harbor and

Vicinity

19 ~~53~~ 54

CHIEF OF PARTY

F. B. Quinn and C. R. Reed

LIBRARY & ARCHIVES

DATE December 3, 1957

B-1870-1 (1)

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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-8163

Field No. PK-05253

State MAINE

General locality GULF OF MAINE

Locality CAPE PORPOISE HARBOR & VICINITY

Scale 1:5,000 Date of survey 19 Oct. - 27 Oct. 1953
(See 1954 WK Title sheet)

Instructions dated 10 Sept. 1953

Vessel SHIP PARKER (U.S. NAVY LAUNCH)

Chief of party F.B. QUINN

Surveyed by J.R. FLAGGMIER & E.K. McCAFFREY

Soundings taken by ~~XXXXXX~~ graphic recorder, hand lead, ~~XXX~~

Fathograms scaled by E.K. McCAFFREY

Fathograms checked by NORFOLK PROCESSING OFFICE

Protracted by A.G. ATWILL

Soundings penciled by A.G. ATWILL

Soundings in ~~XXXXXX~~ feet at MLW ~~XXXXX~~ and are true depths

REMARKS: See attached Descriptive Report covering work done
during the 1954 field season.

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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-8163

Field No. PK-05253

State MAINE

General locality GULF OF MAINE

Locality CAPE PORPOISE HARBOR AND VICINITY

Scale 1:5,000 Date of survey 9/24/54 to 10/14/54
(See 1953 Wk. Title Sheet)

Instructions dated 6 MARCH 1953 & 29 JAN. 1954

Vessel EAST COAST FIELD PARTY (Launch ZIP)

Chief of party CLARENCE R. REED

Surveyed by ROBERT B. NOBLE & CHARLES E. HORNE

Soundings taken by ~~XXXXXXXX~~, graphic recorder, hand lead, ~~XXX~~

Fathograms scaled by PARTY PERSONNEL

Fathograms checked by NORFOLK PROCESSING OFFICE

Protracted by A.G. ATWILL

Soundings penciled by A.G. ATWILL

Soundings in ~~XXXXXX~~ feet at MLW ~~XXXXXX~~ and are true depths.

REMARKS: See attached Descriptive Report covering work done
during the 1953 field season.

DISCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEYS H-
(Field No. PK - H - 05253)

Chief of Party

Launch - U. S. N. Motor Sailer

F. B. Quinn

Surveyed in October and November 1953

Surveyed By

J. R. Flaggmier

Scale 1: 5,000

E. K. McCaffrey

A. PROJECT

Survey executed under Instructions Project CS-361, Cape Porpoise, Maine, dated 10 September 1953. Survey terminated per letter dated 30 October 1953, 22/MEK, S-1-PK, Subject: Field Work - Project CS-361, Cape Porpoise Harbor, Maine, and Instructions dated 16 September 1953, 22/MEK, S-2-PK. *CS 361 cancelled and in effect CS 355 in 1954*

B. SURVEY LIMITS AND DATES

Survey commenced on 15 October 1953, and terminated with return of Launch to U. S. Navy on 2 November 1953. ✓

Survey was to cover area of insert on Chart 1205 with suitable overlap, excluding harbor area, of Cape Porpoise, Maine.

Junctions and overlaps were to be made with Hydrographic Survey H-4092, and wire drag Surveys Registered No. 4087a. (1919) and H-4309WD (1923) ✓

Progress of hydrography was impeded by adverse weather, namely: fog, high winds, and rough seas. ✓

C. VESSELS AND EQUIPMENT

Hydrography was performed utilizing a U. S. Navy 26-foot Motor Sailer, on loan from the Portsmouth Naval Shipyard, Portsmouth, New Hampshire. Launch was operated from the village of Cape Porpoise, Maine, with Ship PARKER located at the Portsmouth Naval Shipyard, Portsmouth, New Hampshire. ✓

Fathometer Number 116-S was utilized in depths 5 feet to 125 feet. ✓
Hand lead soundings were utilized in depths of less than 5 feet.

D. TIDE AND CURRENT STATIONS

Standard Tide Gage located at Portland Maine was used, with no correction for time or range, per Director's letter, dated 2 November 1953, 36-rjb. ✓

F. CONTROL STATIONS

Control was obtained from adjusted triangulation and supplemented by topographic signals from Sheet PK - A - 53. *(subsequently destroyed)* ✓

G. SHORELINE AND TOPOGRAPHY

No revisions of shoreline or topography was made. Low water line was not defined as survey was not completed. *Topo from T-111608 & T-11163 of 1953.* ✓

H. SOUNDINGS

Depths were measured by fathometer and lead line. ✓

Standard procedure was used in obtaining bar checks in accordance with Paragraph 557 of the Hydrographic Manual. Attached to this report is "summary of echo corrections", determined from bar checks and phase correction. ✓
Correct motor speed was confirmed per Paragraph 5554, S. P. No. 143.

I. CONTROL OF HYDROGRAPHY

Hydrography was controlled by standard procedure of obtaining three point sextant fixes on signals previously located by triangulation and topography. ✓

J. ADEQUACY OF SURVEY

Survey is not complete. Hydrography was suspended due to adverse weather. *Completed in 1954.*

K. CROSSLINES

Crosslines were not completed. *Completed in 1954*

L. COMPARISON WITH PRIOR SURVEYS

Comparison with prior surveys was not completed as survey not completed. *See DR 1954 Work and TP 5 Review*

M. COMPARISON WITH CHART

Comparison with chart not completed as survey not completed. *See DR 1954 WK and TP 6 Review.*

N. DANGERS AND SHOALS

3 feet at Latitude 43-21.29, Longitude 70-25.29 *147. RE (1954) pos 534*
4 feet at Latitude 43-21.28, Longitude 70-25.31
15 feet at Latitude 43-21.01, Longitude 70-25.50 ✓
15 feet at Latitude 43-21.01, Longitude 70-25.52 ✓

Above reduced depths previously reported in letter dated
28 October 1953.

Investigation of special features was not completed therefore no
recommendations can be made.

O. COAST PILOT INFORMATION

None obtained. ✓

P. AIDS TO NAVIGATION

No fixed aids to navigation were located. Floating aids to
navigation are listed in Appendix B. ✓

Q. LANDMARKS FOR CHARTS

No new landmarks were found in this area. ✓
Sec D.R. 1954 Work.

R. GEOGRAPHIC NAMES

No new geographic names were discovered. ✓

S. CURRENTS

Information on currents was not obtained as survey not completed. ✓

Respectfully submitted

F.B. Quinn
for John R. Plaggner

Forwarded:

F.B. Quinn
F. B. Quinn
Commander, USCGS
Chief of Party

Attachments:

Appendix A - Velocity correction
B - Phase correction
C - Floating aids
D - Statistics
E - Tide notes
F - Approval sheet

APPENDIX A

VELOCITY CORRECTIONS

Determined from bar checks, to be used through this work.

	<u>from</u>	<u>to</u>
- 1.4'	0.0'	5.0'
- 1.2'	5.1'	14.0'
- 1.0'	14.1'	30.0'
- 0.8'	30.1'	62.0'
- 0.6'	62.1'	66.0'
- 0.4'	66.1	135.0'

APPENDIX B

PHASE CORRECTIONS

A to B	+ 0.6 feet
A to C	+ 1.1 "
A to D	+ 0.5 "

APPENDIX E

TIDE NOTE FOR SURVEY H-

(Field No. PK - 05253)

Tide data for reduction of soundings was obtained from the Standard Automatic Tide Gage at Portland, Maine. The mean low water datum was 3.6 feet on the tide staff, as furnished by the Washington Office and no correction was made to time of height of water in the preparation of reducers.

APPROVAL SHEET

The Boat Sheet, Sounding Volumes, Tide Correction Data, Fathograms, Fathometer Corrections and Descriptive Reports have been examined by me and are approved.

Weather conditions prevented completion of this survey, including extension of the fathometer correction curve to depths of 130 feet where very few soundings were taken. The bar check curve has been extended to this limit from observations to 80 feet.



F. B. Quinn
Commander, USCGS
Commanding Ship PARKER

12/2/53

NOTES FOR DESCRIPTIVE REPORT TO ACCOMPANY

Hydrographic Survey Sheet H-8163, (FIELD NO. PK-05253)
Cape Porpoise, Maine

EAST COAST FIELD PARTY

CLARENCE R. REED, CHIEF OF PARTY

PROJECT CS-355

1954

SCALE 1:10,000

* * * * *

PROJECT This survey was accomplished under instructions dated 6 March 1953 and supplemental instructions dated 29 January 1954 the latter canceling Project CS-361, the instructions for which were issued to the Ship PARKER on 10 September 1953, and including it in Project CS-355. A separate descriptive report for the portion of the survey performed by the party from the PARKER has already been submitted by that party.

SURVEY LIMITS AND DATES The area surveyed on this sheet covers the Maine outer coast in the vicinity of Cape Porpoise, bounded as follows:
On the north by latitude $43^{\circ} 22.55'$, on the east by longitude $70^{\circ} 24.50'$, on the south by latitude $43^{\circ} 20.50'$ and on the west by the Maine coast.

Junctions were made with prior survey H-4305, 1923, scale 1:20,000 on the north, surveys H-4309 W.D., 1923, scale 1:20,000 and H-4087 W.D., 1919, scale 1:40,000 on the east, survey H-4092, 1919, scale 1:5,000 on the south and with the U. S. Army, Corps of Engineers survey of 14 and 15 April 1954, scale 1:2,000 in the dredged channel.

See
WP5
Review

VESSEL AND EQUIPMENT Launch "ZIP", a 35 foot power launch leased for the work, was used for the hydrography. The launch operated from a mooring in the dredged mooring area immediately south of Bickford Island. Graphic Recorders No. 121S and 119S were used with transducers in a fish mounted over the starboard side of the launch. Soundings other than echo soundings were taken with a hand lead.

TIDE AND CURRENT STATIONS The tide note is attached to this report. No current stations were observed.

SMOOTH SHEET The smooth sheet is to be plotted by the Norfolk Processing Office.

CONTROL STATIONS Control consisted primarily of triangulation stations, previously located recoverable topographic stations, planetable topographic signals located by the PARKER in 1953 and planetable topographic signals located by this party in 1954. Three hydrographic signals were used, one located by the PARKER in 1953 and two located by this party.

SHORELINE AND TOPOGRAPHY Shoreline and topographic details shown on the boat sheet in black and green were transferred by the Ship PARKER from a U.S. Army, Corps of Engineers film positive. The shoreline and topographic details shown in blue were transferred to the boat sheet, by this party, from a 1:5,000 scale enlargement of the portion of Air-photo Compilation Sheet T-11163 covered by this survey sheet.

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Several small inaccuracies in the alongshore details were noted and revised by sketching from the launch. These revisions as made by the hydrographer are shown on the boat sheet in red. The shoreline manuscript also shows a small reef in latitude $43^{\circ} 21.11'$, longitude $70^{\circ} 25.71'$. This reef is non-existent although the surrounding area is shoal and rocky. The low water line is not defined by the soundings in most areas due to the steep banks and rocky character of the shoreline. *Reef not shown on reviewed M/s of T-11163 (1953)*

SOUNDINGS Depths were measured with graphic recorders and hand lead. Bottom samples were obtained with an armed hand lead.

CONTROL OF HYDROGRAPHY The hydrography was controlled by the three-point-sextant-fix method. Fixes were taken at one minute intervals. A slight position jump was noted when changing fixes in the area immediately east of Cape Rocks, however it is felt that this was largely, if not entirely, due to strong current changes which were nearly always evidenced here.

ADEQUACY OF SURVEY This survey is considered complete and adequate to supersede prior surveys. Satisfactory Junctions with adjoining surveys were obtained. *Joins H-8255 (1955) on N, E, & S.*

CROSSLINES Sounding lines run by the survey party from the Ship PARKER in 1953 were used as crosslines on the south end of the survey sheet. In other areas crosslines were run by this party. Satisfactory crossings were obtained on all crosslines.

COMPARISON WITH PRIOR SURVEYS Survey H-1117A, 1871 is very old and appears to have been very poorly controlled. Therefore, it is felt that a detailed comparison with this survey would be of little value. A comparison with survey H-4092, 1919 shows the general agreement to be good, however the present survey shows shoaler depths due to the closer development and use of graphic recorders. These features will be discussed in detail in the next section of this report. *see P5 Review*

COMPARISON WITH CHART The most important soundings from Chart 1205 were transferred to the boat sheet, these soundings appear in green. Numerous differences between the charted information and this survey were noted. A discussion of these differences follows: *See P5 Review*

Chart 1205 shows a 4 foot sounding in latitude $43^{\circ} 21.04'$, longitude $70^{\circ} 25.75'$ which apparently originates from survey H-1117A, 1871. This area was closely developed by additional sounding lines but no evidence of any shoal soundings here was found. Since survey H-1117A is very old and apparently poorly controlled it is recommended that the charted 4 foot sounding be deleted from the chart.

Two small, uncharted shoals were found in latitude $43^{\circ} 21.05'$, longitude $70^{\circ} 25.86'$. The entire area was developed and a least depth of 5.9 feet found on the more easterly of the two shoals. This sounding was a hand lead sounding recorded as position 2 j. The other shoal has a least depth of 6.0 feet obtained on line between positions 85 and 86 a. It is recommended that these shoals be added to the chart. *See item 37 Rpt. & P5 Review*

Chart 1205 shows a 16 foot shoal in latitude $43^{\circ} 21.25'$, longitude

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70° 25.51', just west of black can buoy No. 3. This survey revealed shoaler depths than charted in this area. The least depth found was 13.8 feet on line between positions 52 and 53 e. It is recommended that the present charted 16 foot depth be deleted from the chart and the new shoaler depth from this survey be added.

Chart 13 ft sdg.

An uncharted shoal in latitude 43° 20.94', longitude 70° 25.65' was found and developed during the survey. The shoalest depth obtained was 15.4 feet on line between positions 71 and 72 f. It is recommended that this shoal be added to the chart. *Recommendation concurred in*

Chart 1205 shows depths of 18 feet in latitude 43° 21.35', longitude 70° 25.21'. This survey revealed shoaler depths lying approximately 90 meters east. The shoalest sounding obtained was 10.2 feet on line between positions 18 and 19 a. It is recommended that the present charted soundings in this area be replaced by the shoaler soundings from this survey.

Chart 10 ft

Depths shoaler than charted were found in the vicinity of latitude 43° 20.85', longitude 70° 25.25'. Chart 1205 shows 45 foot depths in this area while this survey revealed 32 foot depths. It is recommended that the present charted soundings in this area be replaced by the shoaler depths found on this survey. *Recommendation concurred in*

An uncharted rock in latitude 43° 21.39', longitude 70° 25.45' was located by the hydrographic party and recorded as position 7 k. This rock, which also appears on the Air-photo Compilation Sheet, is covered by 1.1 feet at MLW. It is recommended that this rock be added to the chart.

Chart *

Soundings obtained on this survey indicate that the 30 foot depth curve in the vicinity of latitude 43° 21.80', longitude 70° 24.80' extends offshore in a northeasterly direction considerably farther than shown on Chart 1205.

Revised 30 ft curve on chart

The least depth obtained on this point of shoal was 25.3 feet, on line between positions 14 and 15 e. Chart 1205 shows 43 foot depths in this area. It is recommended that the 30 foot depth curve and the soundings in this area be revised on the chart to agree with this survey.

25 ft sdg.

An uncharted rock was found in latitude 43° 21.82', longitude 70° 25.14'. This rock, which is bare 4.4 feet at MLW, was located and recorded as position 4 d. It is recommended that this rock be added to the chart.

Chart * (4)

PRELIMINARY REVIEW ITEMS

The following items, from the Preliminary Review by the Division of Charts, were investigated with findings as follows:

Item 33 No evidence of the charted 4 foot sounding in latitude 43° 21.92', longitude 70° 25.03' was found although the area was closely developed. It is recommended that this sounding be deleted from the chart. *Recommendation concurred in. See 175 Review.*

Item 34 & 35 The two charted rocks awash in latitude 43° 21.87', longitude 70° 25.10' and the single charted rock awash in latitude 43° 21.98', longitude 70° 25.27', were located by detached position from a skiff. The locations of these rocks are recorded as positions 1, 2 and 3 d. The most northerly rock was found approximately 55 meters WSW of its charted position. The other 2 rocks were found approximately

See P6 of Review

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75 meters NE of their charted positions. Since the old surveys from which these rocks originate appear to be poorly controlled it is recommended that these rocks be charted in the new positions determined by this survey. *Recommendations concurred in.*

Item 36 The 4 foot sounding found by the survey party from the Ship PARKER in 1953 was very closely developed and as the survey progressed it became evident that this was not a new shoal but rather a new location of the shoal charted as Old Prince. The shoalest sounding obtained was a ~~hand lead~~ ^{6 ft} sounding of 1.8 feet, recorded as position 53 h. This rock is nearly always evidenced by heavy swells or breakers. Since the Old Prince as charted apparently originates from survey H-1117A, which appears to have been poorly controlled, it is recommended that this feature be charted in its new position and with the shoaler depths found on this survey. The new position lies approximately 100 meters SSE of the charted one. *(Lat. 43° 02' 13.0", Long 70° 25.31")* chart 1 ft RK as #.

The 15 foot sounding in latitude 43° 21.01', longitude 70° 25.50' found by the survey party from the Ship PARKER in 1953, was carefully developed by this party. A least depth of 14.8 feet was found with a hand lead and recorded as position 1 j. Survey H-4092, 1919 and Chart 1205 show a 17 foot shoal here. It is recommended that the present charted depth be replaced by the shoaler depths from this survey. chart 15 ft

Item 37 The area in the vicinity of the charted 13 foot sounding in latitude 43° 21.11', longitude 70° 25.93' was closely developed because of the broken character of the bottom. The shoalest soundings were found approximately ~~300~~ meters ~~away~~. This shoal has already been discussed under COMPARISON WITH CHART. *5 ft. sdg. in 43° 21.07' 70° 25.97'*

Item 38 No 4 foot depths were found in latitude 43° 21.05', longitude 70° 25.80' as shown on Chart 1205, Survey sheet H-1117A, 1871, shows a 4 1/2 foot sounding here and the notation "breakers". No breakers were ever observed here by this party although hydrography was at times carried out in quite heavy seas. It is the opinion of the hydrographer that the position of this sounding is probably in error. Since no evidence of this sounding was found on this survey it is recommended that it be deleted from the chart. See IPS REVIEW

The area in the vicinity of the charted 10 foot sounding in latitude 43° 20.90', longitude 70° 26.05' was developed by closely spaced lines in an effort to find evidence of this charted depth. No evidence of any shoal soundings was found. It is recommended that the 10 foot sounding be deleted from the chart. *carried forward to H-8163* delete charted 10 ft. sdg. IPS REVIEW

Items not numbered The charted 19 foot shoal in latitude 43° 22.48', longitude 70° 24.72', which evidently originates from survey H-4305, 1923, was developed on this survey. The shoalest sounding obtained was ~~21.1~~ ²⁰ feet on line between positions 56 and 57 d. Since no drift sounding was done in this area shoaler depths are possible. Therefore, it is recommended that the present charted depth be retained.

20.6 ft. sdg. pps. 56-57d 43° 22.99 70° 24.74

DANGERS AND SHOALS Newly found dangers and shoals have been discussed under COMPARISON WITH CHART.

COAST PILOT INFORMATION of a separate report.

Coast Pilot information will be the subject

AIDS TO NAVIGATION No fixed aids to navigation were located by this party. Floating aids southeast of the entrance were relocated as it was obvious that they had been moved since their location by the survey party from the Ship PARKER in 1953. The locations made by this party should be used on the smooth sheet. See
IP6
Review

LANDMARKS FOR CHARTS A new elevated steel water tank in latitude 43° 22.23', longitude 70° 26.70', which was under construction but nearly completed at the time of this survey, was located by sextant. Details on this tank are as follows: pos. 9j, 13j, 1-3c

above MHW 199 ft. L-94 (1955)

Elevation, top of tank above MLW -----208 ft. -

Elevation, top of tank above ground-----142 ft. /

It is recommended that this excellent landmark be charted. Its geographic position as scaled from the boat sheet is: (C.L. 94, 1955)

Latitude 43° 22' ± 427 meters

Longitude 70° 26' ± 946 meters

GEOGRAPHIC NAMES There are no new or additional geographic names to report. /

Respectfully submitted,

Robert B. Noble
Robert B. Noble
ENS., USC&GS

Approved and forwarded,

Clarence R. Reed
Clarence R. Reed
CDR, USC&GS
Chief of Party

TIDE NOTE TO ACCOMPANY

Hydrographic Survey Sheet H-8163(Field No. PK 05253)

A portable automatic tide gage was maintained at Bickford Island, Cape Porpoise, Maine. No differences in time or height was applied to the observed tides. Planes of reference were computed from known elevations of previous tidal bench marks. ✓

<u>STATION</u>		<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>MLW ON STAFF</u>
Cape Porpoise	✓	43° 21.95'	70° 25.96'	1.1

FATHOMETER CORRECTIONS TO ACCOMPANY

Hydrographic Survey Sheet H-8163, (Field No. FK 05253)

The corrections tabulated below are based on an initial set at zero on the fathogram for all soundings made before 11 October 1954. The corrections tabulated below for soundings made on October 11 and after are based on an initial set at 1.0 on the fathogram. Where the initial varies from its proper setting on the fathogram INDEX CORRECTIONS must be entered in the sounding volumes.

FATHOMETER NO. 121S

9 September - 27 September and 1 October - 5 October 1954

CORRECTIONS	DEPTH	
A RANGE	From	To
+1.0	0.0	8.0
+0.8	8.5	16.0
+0.6	16.5	23.0
+0.4	23.5	31.0
+0.2	31.5	38.0
0.0	38.5	45.0
-0.2	45.5	53.0
-0.4	53.5	55.0
B RANGE		
+0.8	35.0	47.0
+0.6	47.5	60.0
+0.4	60.5	66.0
+0.5	67.0	77.0
0.0	78.0	90.0
C RANGE		
-0.5	ALL DEPTHS	

FATHOMETER NO. 119S "c" day
29 September 1954 Only

CORRECTIONS	DEPTH	
A RANGE	From	To
+0.6	2.0	8.0
+0.8	8.5	30.0
+0.6	30.5	55.0
B RANGE		
+1.2	35.0	54.0
+1.0	54.5	80.0
+0.8	80.5	90.0

FATHOMETER NO. 121S

(New phasing head installed on 7 October 1954)

11 October - 14 October 1954

CORRECTIONS	DEPTH	
	From	To
A RANGE		
0.0	0.0	14.0
-0.2	14.5	27.0
-0.4	27.5	40.0
-0.6	40.5	55.0
B RANGE		
+0.2	35.0	45.0
0.0	45.5	55.0
-0.2	55.5	66.0
-0.5	67.0	90.0
C RANGE		
-1.0	70.0	100.0
-1.5	101.0	125.0

APPROVAL SHEET FOR

HYDROGRAPHIC SURVEY H-8163(PK-05253)

The boat sheet and 1954 records for Hydrographic Survey H-8163 (PK-05153) have been inspected by me and are approved.

The 21 foot sounding (Item 39 of Preliminary Review to ECFP) was not investigated on the present 1/5,000 scale survey as the area can be more thoroughly developed with control more advantageously situated on the regular 1/10,000 scale sheet which will adjoin this survey. Falls out - side area of H-8163.

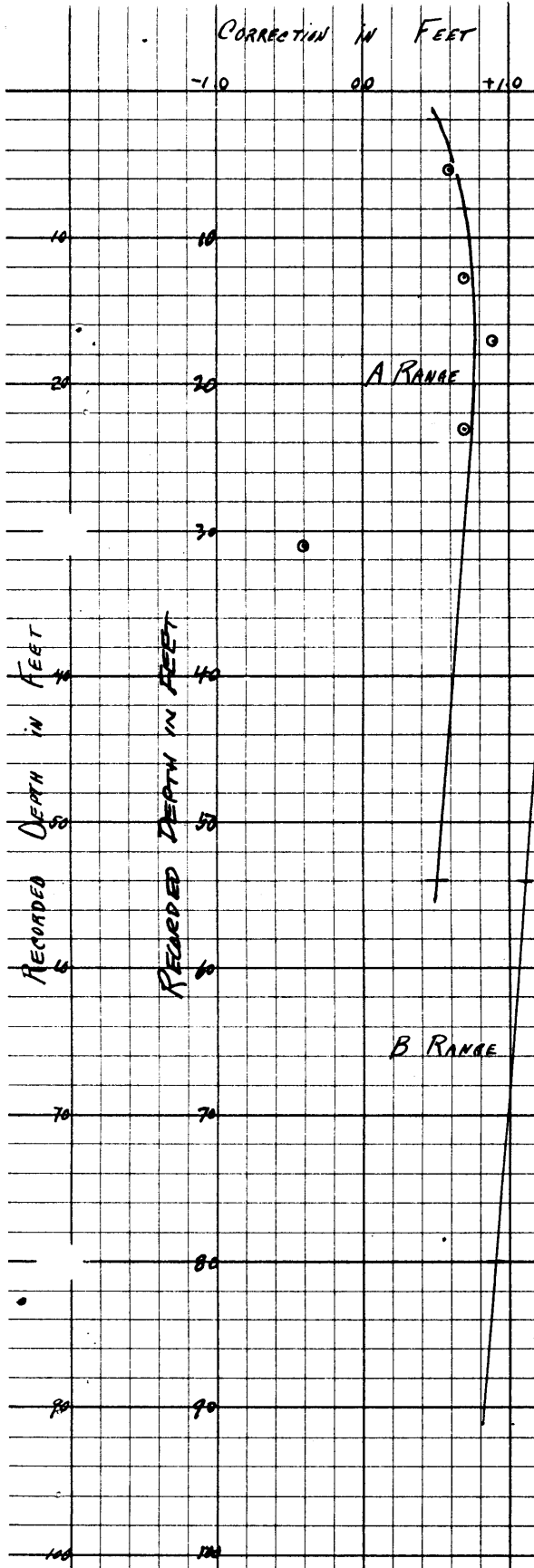
WD
Additional development of the 19 foot sounding charted in latitude 43° 22' 48.", longitude 70° 24.72' is recommended on the 1/10,000 scale (H-8255) survey which will adjoin the present survey. Cleared by drag 16 ft effective depth on H-4309 WD (1953). Sdg 21 ft obtained during WD of H-8255 (1955-58). 19 ft. carried forward to H-8163 from H-4309 WD.

Since development of the above shoals can be made on adjoining sheets, Hydrographic Survey H-8163 is considered to be complete and no additional field work is recommended in the area covered. ✓

A detailed comparison with overlapping soundings on U.S. Army, Corps of Engineers survey drawing No. 1226 D-6-4 dated 5/5/54 scale 1/2,000 was not made due to the differences in scale and grid. A rough comparison shows no serious discrepancy. The USE survey can be applied to C&GS charts by using BML and Goat Island Light for control - the only two common control stations. See TP-6 Review

Clarence R. Reed

Clarence R. Reed
CDR, USC&GS
OinC, East Coast Field Party



VELOCITY CORRECTION CURVE
 FATH 1195 LAUNCH ZIP
 1954 SUMMER FIELD SEASON

DEPTH	A RANGE	CORRECTION
2.0 - 8.0		+0.6
8.5 - 30.0		+0.8
30.5 - rest of A Range		+0.6

B RANGE	CORRECTION
35.0 - 54.0	+1.2
54.5 - 80.0	+1.0

Above corrections to be used for
 Launch Zip on 9/29 and 10/18 only.

NOTE: B Range Curve inferred from
 previous curves for Fath 1195
 (B Range sounds 0.6' shorter
 than A Range)

Plotted by RBN
 ✓ by ERM°C

NORFOLK PROCESSING OFFICE
LIST OF SIGNALS
H-8163

TRIANGULATION STATIONS

AGE	STAGE ISLAND, 1850-1928	
CHU	CAPE PORPOISE CHURCH, SPIRE, 1941	
GOAT	GOAT ISLAND LIGHTHOUSE, 1903-41	
WAT	KENNY BUNKPORT WATER TANK 1955	<i>pos. computed & plotted by verefier</i>

TOPOGRAPHIC STATIONS

SOURCE Pk-A-53

Ant	Bea	Bim	Bob	Cape	Chim	Con	Dot	Dud
End	Ers	Eve	How	Now	Nor	Not	Pil	Slim
Sow	Tv	Von	Why					

HYDROGRAPHIC STATIONS

Bar	Vol. 4, pg. 15
Red	Vol. 1, pg. 7
Sil	Vol. 4, pg. 15

NORFOLK PROCESSING OFFICE
FLOATING AIDS TO NAVIGATION
H-8163

<u>BUOY</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH</u>	<u>POS. NO.</u>	<u>DATE</u>
Cape Porpoise Hbr. Buoy 11	43-22.21	70-26.14	6.4	1a	10/19/53
Cape Porpoise Hbr. Buoy 9	43-22.08	70-26.09	6.6	2a	"
Cape Porpoise Hbr. Buoy 7	43-21.93	70-25.98	7.6	3a	"
Gangway Rock Buoy 5	43-21.52	70-25.79	16.8	4a	"
Cape Porpoise Hbr. Buoy 3	43-21.20	70-25.47	18.4	125b	9/27/54
Cape Porpoise Hbr. Buoy 4	43-21.27	70-25.43	46.8	124b	"
The Old Prince Bell Buoy 2	43-21.18	70-25.27	43.6	123b	"

NORFOLK PROCESSING OFFICE
STATISTICS
H-8163

1953 SEASON

<u>DAY LTR.</u>	<u>DATE</u>	<u>NO. POS.</u>	<u>H.L. SDGS.</u>	<u>VOL.</u>	<u>STAT. MI. HYDRO</u>	<u>LAUNCH</u>
a (red)	10/19/53	46	44	1	1.2	365
b "	10/20/53	250	-	1	25.2	"
c "	10/27/53	42	-	2	4.9	"

1954 SEASON

a (pur)	9/24/54	206	-	3	17.5	Zip
b	9/27/54	125	1	3&4	9.1	"
c	9/29/54	87	-	4	5.8	"
d	10/ 1/54	109	1	4	9.1	"
e	10/ 4/54	147	-	5	12.5	"
f	10/ 5/54	139	-	5	11.4	"
g	10/11/54	17	-	6	1.4	"
h	10/12/54	61	37	6	3.2	"
j	10/13/54	90	2	6	8.8	"
k	10/14/54	69	14	7	4.0	"
TOTALS		<u>1388</u>	<u>99</u>		<u>114.1</u>	

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8163 (Field No. Pk-05253)

GENERAL

This appears to be an excellent basic survey and no unusual conditions were encountered during the smooth plot. Soundings at crossings check very well considering the extreme irregularity of the bottom.

ADDITIONAL WORK

Additional work in the area of this survey, accomplished under instructions 22/MEK-FP-East Coast, dated 16 Feb. 1955, was made a part of H-8255 and will be smooth plotted on that survey.

SOUNDINGS

Final determination of the position of the 5' sounding at Lat. 43-21.0' and Long. 70-26.01' (pos. 2j, vol. 6), should be done by the Washington Office. The smooth sheet position was plotted on the recorded fix and it falls in the vicinity of charted 4' soundings. The probable position, as shown on the boat sheet, places it approximately 100 meters NNE on a 6' shoal. Check angles were not observed on the fix. 5 ft. sdg. replotted on 3/5 in Lat. 43° 21.06', Long. 70° 25.97'. 4 ft. charted out of position. See P 5
EC-
view

Positions 132 to 134b (red), were not smooth plotted as the fixes were questionable and the soundings not in agreement with surrounding hydrography. ✓

All fathograms were scanned and the soundings reduced with templates by the Processing Office. ✓

Norfolk, Va.
26 Nov. 1957

Respectfully submitted,

Hugh L. Proffitt
Hugh L. Proffitt
Cartographer.

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens

15 Jan. 1958

Plane of reference approved in
7 volumes of sounding records for

HYDROGRAPHIC SHEET 8163

Locality Cape Porpoise, Maine

Chief of Party: F. B. Quinn & C. R. Reed in 1953-1954

Plane of reference is mean low water, reading

8.6ft. on tide staff at of 1912 at Portland

19.0ft. below B.M. 31 (1910)

1.1 ft. on tide staff at Cape Porpoise

22.1 ft. below B.M. 1 (1919)

Height of mean high water above plane of reference is:

Portland 8.9 ft.

Cape Porpoise .. 8.7 ft.

Condition of records satisfactory except as noted below:


Signature

Chief, Tides Branch

FORM 537a
(9-24-47)

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO. T -

TOPOGRAPHIC TITLE SHEET

FIELD NO. PK - A - 53

Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, when forwarded to the Washington Office.

STATE

MAINE

GENERAL LOCALITY

CAPE PORPOISE HARBOR

LOCALITY

CAPE PORPOISE HARBOR

SCALE

1:5,000

DATE OF SURVEY

16 October, 19 53

VESSEL

CHIEF OF PARTY

F. B. QUINN

SURVEYED BY

J. R. FLAGMIER and E. K. McCaffrey

INKED BY

E. K. McCaffrey

HEIGHTS IN FEET ABOVE MHW OR

☐ TO GROUND

☐ TO TOPS OF TREES

CONTOUR

APPROXIMATE CONTOUR

FORM LINE INTERVAL FEET

PROJECT NUMBER

CS - 361

REMARKS

All useful data has been transferred
to H-8163, PK-A-53 marked for
destruction. 1M2 1-26-60

DESCRIPTIVE REPORT
TO ACCOMPANY
TOPOGRAPHIC SURVEY H-
(Field No. PK - A - 53)

CHIEF OF PARTY

F. B. Quinn

A. PROJECT:

Project CS-361, Cape Porpoise Harbor, Maine, Instructions dated 10 September 1953.

B. PURPOSE:

To establish ~~vertical~~ ^{horizontal} control for hydrographic control, vicinity of Cape Porpoise, Maine.

C. GENERAL:

(a) Description of Coast:

The coast is rocky and irregular, with submerged rocks lying off coast.

(b) Existence of landmarks and guides to navigation were verified.

(c) Character of Control:

The control used for this survey consisted of previously established triangulation and topographic stations.

Location of topographic station "BM-1", 1919 was found to be in error. Error determined by resection. Correct location listed in the list of signals accompanying this report.

(d) Surveying Methods:

Standard methods of graphic control were used. Marked triangulation and topographic stations were occupied and cuts taken to prominent objects and erected signals to be used as hydrographic signals. One located hydrographic signal was occupied to check accuracy of survey. No error was found. No auxiliary methods were used in the graphic control. Instruments and equipment were checked per Part 2, Topographic Manual, S. P. No. 144.

(e) Adequacy of Survey:

The survey of Sheet PK - A - 53 is considered complete. No form lines or contouring was done. Survey was for location of hydrographic signals only.

Submitted



John R. Flaggmire
Lieutenant, USCGS

Forwarded:



F. B. Quinn
Commander, USCGS
Chief of Party

LIST OF SIGNALS SHEET PK - A - 53

<u>NAME</u>	<u>DESCRIPTION</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>
ANT	Television Antenna	43-21 - 1391.9	70-26 - 909.3
BIM	BM-1, 1919 (New Location)	43-21 - 1741.2	70-25 - 1225.0
BOB	Flag Pole	43-21 - 333.3	70-26 - 1165.0
CAPE	Temporary White Banner	43-21 - 1326.6	70-25 - 84.0
CHIM	Chimney, White 2½ Story House	43-21 - 1792.8	70-26 - 297.0
END	Flag Pole	43-22 - 967.4	70-25 - 780.4
ERS	Temporary White Banner	43-21 - 544.2	70-25 - 1311.6
EVE	Lone Evergreen Tree	43-21 - 1625.0	70-25 - 623.5
NOR	North Gable, Small House	43-21 - 1260.9	70-26 - 45.0
PIL	Cairn	43-21 - 1011.0	70-25 - 929.6
SLIM	Flag Pole	43-21 - 540.9	70-26 - 959.2
SOW	South Gable, Small House	43-21 - 1252.9	70-26 - 47.0
TV	Television Antenna	43-21 - 1602.9	70-26 - 425.0
VON	Temporary White Banner	43-21 - 837.9	70-26 - 373.0
WHY	Temporary White Banner	43-21 - 1129.9	70-25 - 453.0

✓

APPROVAL SHEET

The Aluminum Mounted Topographic Sheet, Title Sheet
and accompanying Descriptive Report ~~have~~ been
examined by me and are approved.

A handwritten signature in cursive script, appearing to read "F. B. Quinn".

F. B. Quinn
Commander, USCGS
Commanding Ship PARKER

DIVISION OF CHARTS

REVIEW SECTION -- NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8163

FIELD NO. PK-05253

Maine, Gulf of Maine, Cape Porpoise Harbor and Vicinity

SURVEYED: Oct. 1953 - Oct. 1954

SCALE: 1:5,000

PROJECT NO. CS-361

SOUNDINGS: 808 Depth Recorder
Leadline

CONTROL: Sextant fixes
on shore signals

Chief of Party ----- F. B. Quinn and C. R. Reed
Surveyed by ----- J. R. Plaggmier, E. K. McCaffrey,
R. B. Noble and C. E. Horne
Protracted by ----- A. G. Atwill
Soundings plotted by ----- A. G. Atwill
Verified and inked by ----- J. T. Gallahan
Reviewed by ----- I. M. Zeskind
Inspected by ----- R. H. Carstens

DATE: 2/4/60

1. Shoreline and Control

The shoreline originates with reviewed air-photographic surveys T-11160 and T-11163 of 1953.

The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Considering the irregularity of the bottom, depths at crossings are in adequate agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated, except close inshore where the foul character of the bottom frequently prevented development to the low-water line. The 24-ft. and 36-ft. curves were drawn to better define the bottom configuration.

The bottom is very irregular. Submarine features such as reefs, ledges, pinnacles and shoals contribute to the bottom irregularity.

4. Junctions with Contemporary Surveys

The junction with H-8255 (1955-58) on the north, east and south will be considered in the review of that survey.

5. Comparison with Prior Surveys

- A. H-699 (1859), 1-40,000
 H-740 (1859), 1-10,000
H-1117a (1871), 1-10,000

These early reconnaissance surveys cover the area of the present survey. Irreconcilable differences indicating carelessness in plotting and faulty survey methods of these early surveys are noted in the Descriptive Report for H-4092 (1919). This conclusion is further confirmed by a comparison with the present survey. The following items are specifically discussed:

1. The rock awash charted in lat. $43^{\circ}21.97'$, long. $70^{\circ}25.27'$, originates with a 1-ft. sounding on H-740 (1859), and falls in present depths of 10-12 ft. A search for this rock during the present survey failed to reveal its existence at its charted position. However, a rock awash was located during the present survey about 55 meters south southwestward from the charted rock awash. The charted rock should, therefore, be deleted from the chart and the rock awash located on the present survey should be charted.
2. The 4-ft. sounding charted in lat. $43^{\circ}21.05'$, long. $70^{\circ}25.77'$, originates with a $4\frac{1}{2}$ -ft. sounding in an area marked "breakers" on H-740 (1859). The charted sounding falls on the present survey in depths of 15-17 ft. in an area where no breakers were observed during the present survey. The charted sounding is believed to be charted out of position on the prior survey and should actually fall about 275 meters to the west northwestward where a 5-ft. sounding is found on the present survey. The 4-ft. sounding should be deleted from the chart.
3. The 4-ft. sounding charted in lat. $43^{\circ}21.92'$, long. $70^{\circ}25.03'$, is from a poorly controlled sounding line on H-740 (1859). The sounding falls in present depths of 25 ft. in an area which is adequately developed to discredit the existence of the 4-ft. sounding. The 4-ft. sounding should be deleted from the chart.

4. The 10-ft. sounding charted in lat. $43^{\circ}20.90'$, long. $70^{\circ}26.05'$, from H-740 (1859), falls in present depths of 35-46 ft. The vicinity of the charted sounding has been adequately developed on the present survey to discredit the existence of the charted sounding. The 10-ft. sounding should be deleted from the chart.
5. The 2 rocks awash charted in the vicinity of lat. $43^{\circ}21.87'$, long. $70^{\circ}25.10'$, originate with minus soundings on H-1117a (1871) and fall in present depths of 15-16 ft. The charted westerly rock is a minus 1-ft. sounding on a sounding line running westerly from the easterly charted rock which is a minus 5-ft. sounding. Survey H-740 (1859) shows 4 fms. at the position of the westerly rock. Two rocks awash were located on the present survey about 75 meters northeastward from the charted rocks. The charted rocks are considered discredited by the present survey and should be deleted from the chart. In their stead the two rocks awash located on the present survey should be charted.
6. The 9-ft. sounding charted in lat. $43^{\circ}21.92'$, long. $70^{\circ}24.97'$, from H-1117a (1871) falls in present depths of 38 ft. The sounding originates with a poorly controlled line and should actually fall about 50 meters south southwestward where comparable depths are found on the present survey. The charted 9-ft. sounding should be deleted from the chart.

Bottom characteristics were carried forward from H-1117a (1871) to the present survey. With these additions, the present survey is adequate to supersede the prior surveys within the common area.

- B. H-4092 (1919), 1-5,000
H-4305 (1923), 1-20,000

Portions of these surveys fall within the area of the present survey. A comparison between the prior and present surveys in general reveals only minor differences of 2-3 ft. in depths except in the area where a channel leading to Cape Porpoise has been dredged with the resultant changes in depths.

A number of bottom characteristics have been carried forward from the prior surveys to the present survey. With these additions, the present survey is adequate to supersede the prior surveys within the common area.

C. Wire Drag Surveys

H-4087 WD (1919), 1-40,000

H-4309 WD (1923), 1-20,000

These wire drag surveys cover that area of the present survey which lies approximately east of long. $70^{\circ}25'$. Two soundings from H-4309 WD have been carried forward to the present survey. The effective wire drag depths are in harmony with the present survey.

6. Comparison with Chart 1205 (Latest print date 4/6/59)

A. Hydrography

The charted hydrography originates with the prior surveys previously discussed which need no further consideration, with critical depths from the boat sheet (Bp 52155) and smooth sheet (after verification and before review) of the present survey, and with the U. S. Corps of Engineers' survey of 1942 (Bp 36961) and 1954 (Bp 51453). Attention is directed to the differences in reef and ledge delineation between the chart and present survey in the vicinity of lat. $43^{\circ}21.4'$ and long. $70^{\circ}26.1'$. Except as discussed under item 5A, only minor differences of 1-3 ft. between the charted and present survey depths are noted.

The present survey is adequate to supersede the charted hydrography within the common area.

B. Dredged Channels

Controlling depths in the dredged channel leading to Cape Porpoise originate with the U. S. Corps of Engineers survey of 1957 (Bp 56624). The charted information is subsequent to and supersedes the present survey.

C. Aids to Navigation

Except as noted below, the present survey positions of aids to navigation are in substantial agreement with the charted positions and adequately mark the features intended:

Buoys C9 and C-11 which mark that portion of the channel leading to Cape Porpoise north of lat. $43^{\circ}22.1'$ are off station in a north northwestward direction 50 meters and 25 meters respectively.

7. Condition of Survey

- a. The Descriptive Report and sounding records are complete and comprehensive.

b. The smooth plotting was accurately done.

c. About 90 soundings scanned by template on the b-phase of one section of line were in error and were rescanned.


8. Compliance with Project Instructions

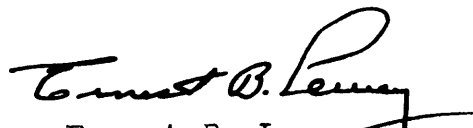
The survey adequately complies with the Project Instructions.

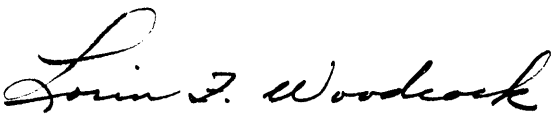
9. Additional Field Work Recommended


The survey is considered basic and no additional field work is recommended.

Examined and Approved:


Max G. Ricketts
Chief, Nautical Chart Branch


Ernest B. Lewey
Chief, Division of Charts


Lorin F. Woodcock
Chief, Hydrography Branch


Samuel B. Grenell
Chief, Division of Coastal Surveys

GEOGRAPHIC NAMES

Survey No. H-8163

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K
<u>Maine</u>			(title)						1
<u>Gulf of Maine</u>			"						2
<u>Cape Porpoise</u>			"						3
<u>Cape Porpoise Harbor</u>			"						4
<u>Old Prince</u>			(see item 36, Page 4, for changed position)						5
<u>Folly Island</u>									6
<u>Green Island</u>									7
<u>Goat Island</u>									8
<u>Trott Island</u>									9
<u>Bickford Island</u>			(tide station)						10
<u>Cape Porpoise</u>			(village)						11
<u>Cape Island</u>									12
<u>Stage Island Harbor</u>			(apply name after inking, N of Cape Island)						13
<u>Little Stage Island</u>									14
<u>Stage Island</u>									15
			Names approved 12-12-57						16
<u>Tide Station off sheet:</u>						L. Heck			17
<u>Portland</u>									18
									19
<u>Redin Island</u>			5 additional names approved 2-23-60. Note that Turbatt Cr. is pending with BGN. L. Heck						20
<u>Vaughn Island</u>									21
<u>Turbatt Creek</u>									22
<u>Paddy Creek</u>									23
<u>Bass Island</u>									24
									25
									26
									27

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8163...

Records accompanying survey:

Boat sheets ..1...; sounding vols. .7...; wire drag vols.;
bomb vols.; graphic recorder rolls .6-Envelopes
special reports, etc. .1-Smooth sheet. .1-Descriptive report....
and 1Cahier-Velocity Correction Reprt.....

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

Number of positions on sheet	1388
Number of positions checked	55
Number of positions revised	10
Number of soundings revised <i>see Verifiers notes</i> (refers to depth only)	95 *
Number of soundings erroneously spaced	5
Number of signals erroneously plotted or transferred	✓
Topographic details	Time 30
Junctions	Time 20
Verification of soundings from graphic record	Time 25

Verification by *J. T. Buller* Total time 338 Date Jan 13, 1959
Reviewed by *Mr. Zerkund* Time 60 Date Feb 4, 1960

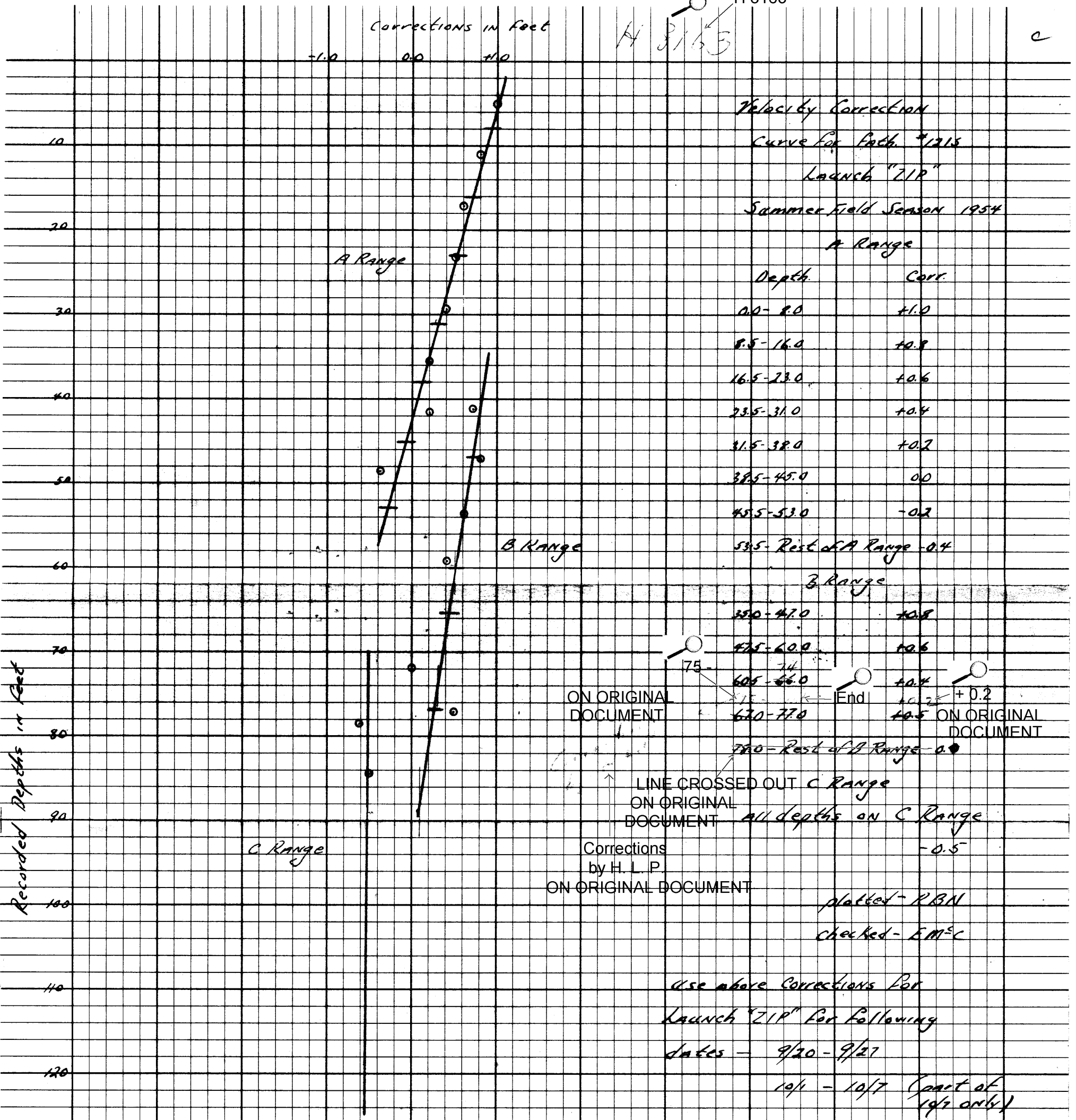
* Template apparently set erroneously

H 8163

c

Corrections in Feet

-1.0 0.0 +1.0



Velocity Correction

Curve for Path #1215

Launch "ZIP"

Summer Field Season 1954

A Range

Depth Corr.

0.0-8.0 +1.0

8.5-16.0 +0.8

16.5-23.0 +0.6

23.5-31.0 +0.4

31.5-38.0 +0.2

38.5-45.0 0.0

45.5-53.0 -0.2

53.5- Rest of A Range -0.4

B Range

55.0-62.0 +0.8

62.5-69.0 +0.6

69.5-76.0 +0.4

76.5-83.0 +0.2

83.5-90.0 0.0

90.5-97.0 -0.2

97.5-104.0 -0.4

104.5-111.0 -0.6

111.5-118.0 -0.8

118.5-125.0 -1.0

125.5-132.0 -1.2

132.5-139.0 -1.4

139.5-146.0 -1.6

146.5-153.0 -1.8

153.5-160.0 -2.0

160.5-167.0 -2.2

167.5-174.0 -2.4

174.5-181.0 -2.6

181.5-188.0 -2.8

188.5-195.0 -3.0

195.5-202.0 -3.2

202.5-209.0 -3.4

209.5-216.0 -3.6

216.5-223.0 -3.8

ON ORIGINAL DOCUMENT

LINE CROSSED OUT C Range

ON ORIGINAL DOCUMENT

all depths on C Range

Corrections by H. L. P.

ON ORIGINAL DOCUMENT

End

ON ORIGINAL DOCUMENT

plotted - RBN

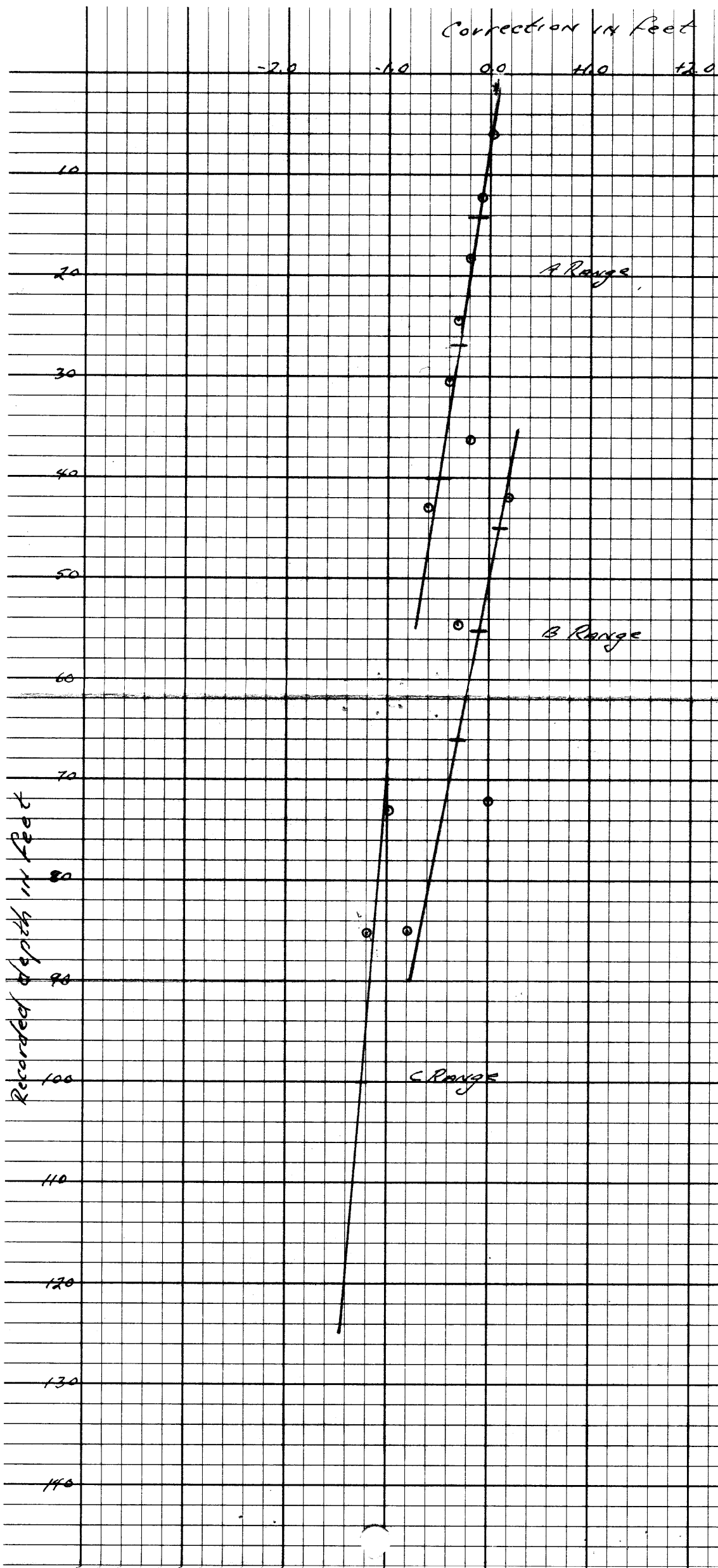
checked - EMSC

Use above Corrections for

Launch "ZIP" for following

Dates - 9/20 - 9/27

10/1 - 10/7 (part of 1954 only)



H 8163

D

Velocity Correction Curve

Fath 1215 LAUNCH "ZIP"

Summer Field Season
1954

Depth	Corr.
0.0 - 14.0	0.0
14.5 - 27.0	-0.2
27.5 - 40.0	-0.4
40.5 - Rest of A Range	-0.6
35.0 - 45.0	+0.2
45.5 - 55.0	0.0
55.5 - 66.0	-0.2
67.0 - Rest of B Range	-0.5
70.0 - 100.0	-1.0
100.0 - Rest of C Range	-1.5

Above corrections to be used
with Launch "ZIP"

From 10/7 - 10/14
(part day only)

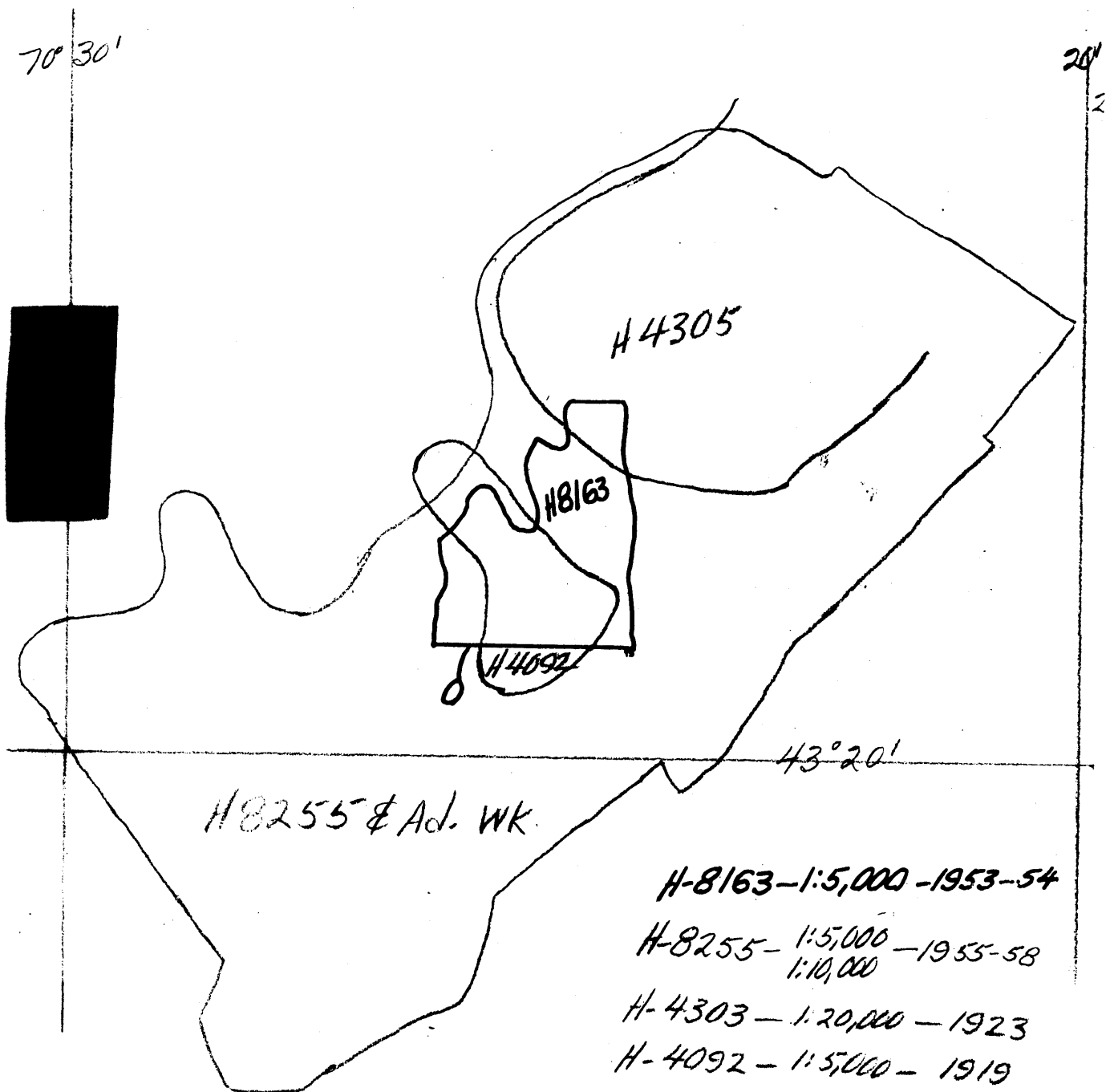
10/19 - 10/29

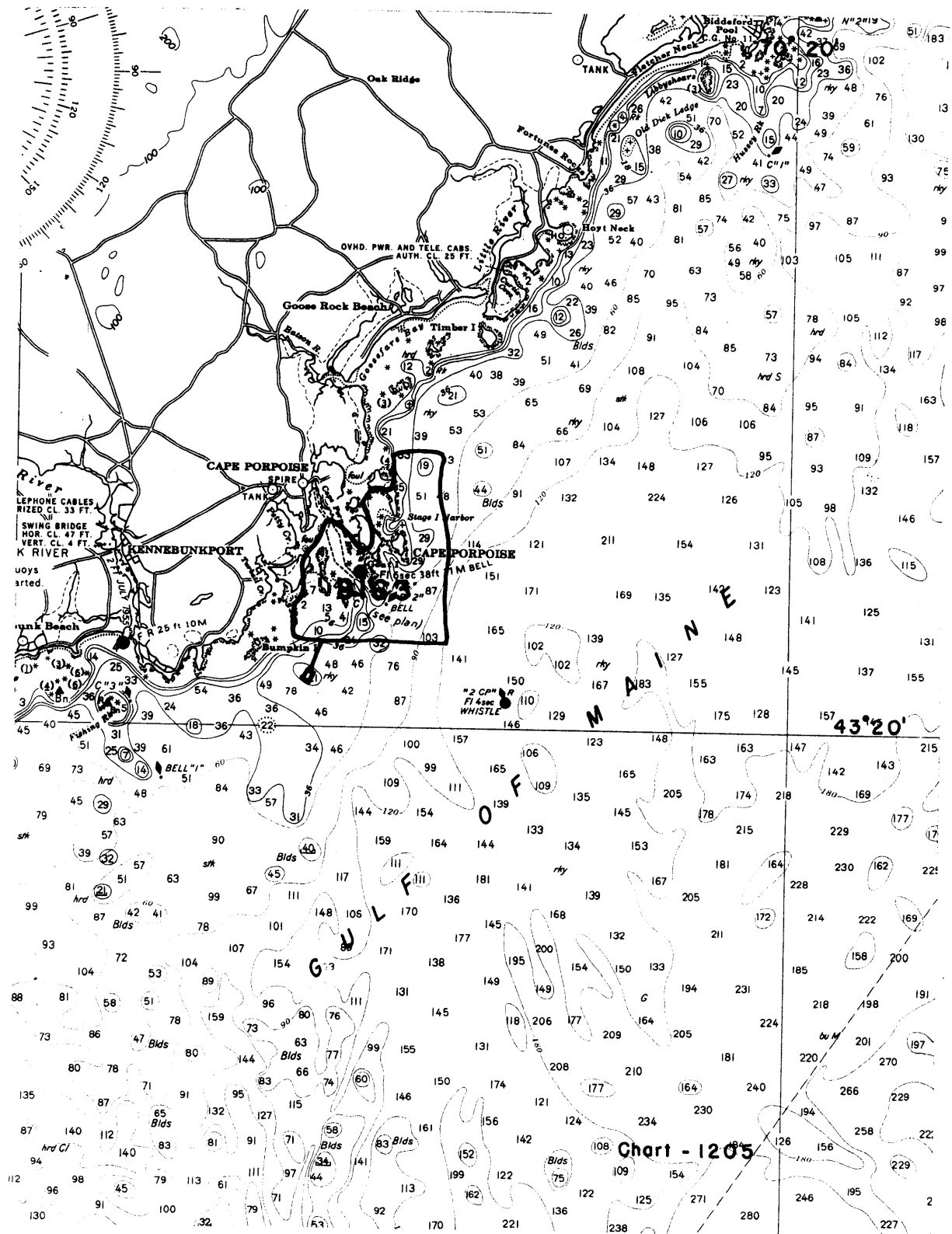
plotted - RBN

checked - E.W.C.

Note: New phasing head
installed on this Fathometer
on 10/2/54.

Diagram 1205





NAUTICAL CHARTS BRANCH

SURVEY NO. H-8163

Record of Application to Charts

[illegible]

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.