8092

Diag. Cht. Nos. 229, 1205-2, & 1206-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. ECFP-1553 *Office No.* H-8092

LOCALITY

State Maine - New Hampshire

General locality Portsmouth, New Hampshire

Locality Approaches to Portsmouth Harbor

19 53 & 54

CHIEF OF PARTY

Clarence R. Reed

LIBRARY & ARCHIVES

DATE July 1, 1955

B-1870-1 (1)

8092

Form 537
(Ed. June 1948)

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET (AMENDED 1954)

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-8092

Field No. ECFP-1553

State Maine - New Hampshire

General locality Portsmouth, New Hampshire

Locality ~~Piscataqua River from Dover Point to Nobles Island & Portsmouth Harbor Entrance outside Wood Island~~ Approaches to Portsmouth Harbor

Scale 1:10,000 Date of survey 5/28 - 9/18/53 & 9/2/54

Instructions dated 6 March 1953, Supplemental Instructions dated 29 Jan. 1954, and letter dated 2 April 1954(Subject: Additional Field Work in Areas Surveyed in 1953)

Vessel East Coast Field Party

Chief of party Clarence R. Reed

Surveyed by R. B. Noble & C. E. Horne

Soundings taken by ~~xxxxxxxx~~, graphic recorder, hand lead, ~~xxxx~~ sounding pole

Fathograms scaled by Party personnel

Fathograms checked by R. B. Noble & C. E. Horne

Protracted by W.W. Feazel

Soundings penciled by W.W. Feazel

Soundings in ~~xxxxxxx~~ feet at MLW ~~XXXXX~~

and are true depths

REMARKS: This survey was started in 1953 and completed in 1954

[redacted]

U. S. GOVERNMENT PRINTING OFFICE 16—88520-1

NOTES FOR DESCRIPTIVE
REPORT TO ACCOMPANY

HYDROGRAPHIC SHEET H-8092, (FIELD NO. ECFP 1553)
Piscataqua River from Dover Point to Nobles Island,
& Portsmouth Harbor Entrance outside Wood Island

EAST COAST FIELD PARTY — CLARENCE R. REED, CHIEF OF PARTY

PROJECT CS-355 — 1953 — SCALE 1:10,000

* * * * * * * * * * * *

PROJECT — This survey was accomplished under instructions dated 6 March 1953, calling for modern hydrographic surveys of the northern Massachusetts and New Hampshire coastal regions.

SURVEY LIMITS AND DATES — The survey on this sheet covers the Piscataqua River, east of the bridge at Dover Point, as far as the bridge at Nobles Island and the Maine - New Hampshire outer coast as follows:

Bounded by the south shore of Gerrish Island as far east as Latitude 43°-04.10', Longitude 70°-40.60', thence to Latitude 43°-03.75', Longitude 70°-40.10', thence to Latitude 43°-02.85', Longitude 70°-40.54', thence due west to the New Hampshire shore, thence to Wood Island.

The portions of Sagamore Creek lying west of the bridge in Longitude 70°-45.95' and Spruce Creek north of the bridge in Latitude 43°-05.00' also appear on this sheet.

Junctions were made with prior surveys H-7795, 1950, scale 1:5,000, at the entrance to Little Harbor and with contemporary surveys shown on sheet H-8094, (FIELD NO. ECFP 1753) on north, sheet H-8090, (FIELD NO. ECFP 05153) at Nobles Island and the entrance to Portsmouth Harbor, and sheet H-8091, (FIELD NO. ECFP 1453) on the south. Review. #4

VESSEL AND EQUIPMENT — Launch No. CS-82 was used for the hydrography. The launch operated from a mooring at the U.S. Coast Guard Station at Fort Constitution, Portsmouth, New Hampshire.

Graphic Recorder No. 150 SPX, 67 and 138 SPX were used with their transducers mounted inboard. Soundings other than echo soundings were obtained with sounding pole or handlead.

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 — The control consisted mainly of triangulation and photo-hydro stations, the latter were transferred from Air photo Compilation Sheets No. T-11143, T-11144 and T-11147. (1952) Three photo-hydro signals were also transferred from Air Photo Compilation Sheet No. T-11168, (1952) (scale 1:5,000). In Spruce Creek, north of Latitude 43°-06.00', where photogrammetric control was lacking, (T-11144 later available) control stations and shoreline were located by planetable. One hydrographic station, at the south end of Spruce Creek was located by sextant fix at the station site.

* G.Control ECFP-Aa-53 (RKS. in Spruce Crk. from G.Control) G.C. sheet destroyed
Shoreline from T-11144 (52) and control
(Desc. Report of G.C. sheet enclosed)

SHORELINE AND TOPOGRAPHY The shoreline and topographic details were transferred from Air Photo Compilation Sheets No. T-11143, T-11144, and T-11147, (1952) except for the north end of Spruce Creek as previously mentioned. T-11146 Review, #1

The low water line is not defined by the soundings in most areas due to the steepness of the banks and the danger of approaching the shore too closely with a deep-draft launch. (Rks. in N. end of Spruce Crk. from G. Control ECFP-Aa-53; (G.C. sheet destroyed, - Desc. Report enclosed in this D.R.)

SOUNDINGS Depths were measured with graphic recorders, sounding pole or handlead. Bottom samples were obtained with an armed handlead.

CONTROL OF HYDROGRAPHY The hydrography was controlled by the three-point-sextant-fix method. Check angles were observed at all detached positions when possible. Fixes were taken at 1 to 1½ minute intervals. No unusual jumps were noted when changing control stations. In Chauncey and Sagamore Creeks some positions on the sounding lines were fixed by reference to distinctive shoreline details or estimated distances from control stations. Appropriate remarks were entered in the sounding volumes.

ADEQUACY OF SURVEY This survey is considered complete and adequate to supersede prior surveys. The junctions with adjoining surveys are satisfactory as depth curves can be drawn and there are no holidays.

CROSSLINES Prescribed crosslines were run with satisfactory agreement at crossings.

COMPARISON WITH PRIOR SURVEYS The general agreement between this survey and prior surveys is good. A detailed comparison with charts No. 229 and 329 will be made.

COMPARISON WITH CHART Soundings were transferred to the sheet from charts 229 and 329 before beginning hydrography these soundings are shown in green ink. Present soundings which disagree materially from the charted soundings, as well as other discrepancies, are listed below.

LATITUDE	LONGITUDE	CHART 229	1953 SURVEY
* 43°-06.88'	70°-48.53'	1'	(1954) 5' } Review, par. 5
* 06.83	48.51	1	6 }
06.~~90~~88	48.~~64~~59	20	~~10~~ 14-19
07.10	48.52	8	~~12~~ 5-10
06.73	48.~~20~~18	44	~~38~~ 30-36
06.99	48.6~~5~~7	30	~~37~~ 30-36
07.~~20~~15	49.30	29	~~38~~ 32
~~07.80~~	~~48.84~~	~~24~~	~~16~~

* These charted 1 foot shoals were searched for at low water, but not found. Local fishermen say there are no 1 foot depths here. It is recommended that these 1 foot shoals be deleted from the chart. Review, #5. Add'l search made in 1954, - See supplental Desc. Report

LATITUDE	LONGITUDE	CHART 329 (retained from H-3975 W.D. (1917))	1953 SURVEY
43°-03.18'	70°-40.16'	42	~~60~~ 42
03.75'	40.10'	57	~~39~~ 40-60 (steep slope)
** 03.51'	40.5~~3~~	3	~~2~~ 3 (2 ft. charted from B. sheet)

** Shoalest sounding on Phillips Rock.

Several small boat houses or piers, extending beyond the HWL are shown along the north bank of the Piscataqua River between Longitude 70°-47' and 70°-48'. These piers or boathouses are no longer in existence and should be deleted from the chart, the remaining boathouses in this area are well inside the HWL.

The charted pier in Latitude 43°-05.85', Longitude 70°-47.00' is considerably longer than shown on chart 229. This pier appears to be detailed correctly on Air Photo Compilation Sheet No. T-11143.(1952) (pier revised on Cht. 229)

There is a small island in Latitude 43°-05.36', Longitude 70°-45.91' which does not appear on chart 229. This island, composed of stone rubble, is approximately 7 meters in diameter and is bare 3.0 feet at MHW. Signal RUB was located in the center of this island.

The charted rock awash (known as Boiling Rock) in Latitude 43°-05.87', Longitude 70°-46.86' was found, located and is described in the sounding volume, however the charted position of this rock appears to be in error. The new position of this rock lies 22 meters SSE of the charted position. (charted position appears to be O.K.)

Chart 229 shows a dashed line crossing the mouth of the small creek in Latitude 43°-05.45', Longitude 70°-45.75', Pilings of an old railroad bridge were found on both sides of the mouth of this creek, but there is no part of the bridge itself remaining. This dashed line should be deleted from the chart.

The pier shown on chart 229 in Latitude 43°-05.~~45~~19', Longitude 70°-45.95' is in ruins and should be charted as a pier in ruins. There is deep water on the south side of this pier between the pier and the three pilings located by positions 1, 2 and 3 j day.

Chart 329 shows an abandoned bridge in Latitude 43°-05.20', Longitude 70°-43.10'. This bridge is a fixed railroad bridge in ruins. The vertical and horizontal clearances are incorrectly charted. The vertical clearance is 5.5 feet at MHW and the horizontal clearance is 24.0 feet as measured in the field. (corrected on Cht. 329)

An island in Latitude 43°-02.93', Longitude 70°-43.00' is shown on chart 329. There is no island in this vicinity. It is recommended that this feature be deleted from the chart. (Review, par. 6A.)

PRELIMINARY REVIEW BY CHART DIVISION (CHART NO. 229)

The following items of the Preliminary Review were investigated with findings as follows:

Item 1 The charted rock awash in Latitude 43°-07.14', Longitude 70°-48.31' was searched for at a time when approximately one foot of water covered the area. A thorough search of the area was made but no evidence of this rock was found. This area is covered by dark patches of eel grass 1 to 2 meters in diameter which could presumably be mistaken for rocks on an air photograph. It is recommended that this rock be deleted from the chart. (Review, par. 6A.)

The charted rock in Latitude 43°-06.~~64~~57', Longitude 70°-48.33' was searched for when no water covered the area. A small group of rocks, inside the low water line, was found and the position of the highest of the group determined. This position agreed very closely with the charted position. These rocks are very insignificant and low lying, the highest rock being only 1 foot above the surrounding mud-flats. In view of the fact that these rocks are so small and there are numerous other similar rocks in this foreshore area, it is recommended that this rock ~~be deleted from~~ remain on the chart. (Pres. survey shows RK uncov. 2 ft. @ M.L.W.) Retain RK.

The charted rock awash in Latitude 43°-07.03', Longitude 70°-49.40' was found as charted. This rock is 3 meters in diameter and bares ~~1.6~~ 2.0 feet at MLW. It is recommended that this rock continue to be charted.

The charted rock awash in Latitude 43°-07.19', Longitude 70°-49.66' was investigated on hydrographic sheet H- 8094, (FIELD NO. ECFP 1753). For results of investigation see descriptive report pertaining to that sheet.

The charted rock awash in Latitude 43°-05'.10', Longitude 70°-45.42' was investigated on hydrographic sheet H- 8090, (FIELD NO. ECFP 05153). For results of investigation see descriptive report for that sheet. See H-8090 (1953-55)

Item 12 The overhead cable clearance in Latitude 43°-05.70', Longitude 70°-46.65' was submitted in a special report dated 1/20/54. The highway crossing Spinney Creek in Latitude 43°-05.79' is an earth fill, not a bridge. Flow into Spinney Creek is controlled by manually operated gates making it inaccessible to navigation, the overhead cable clearance in Latitude 43°-06.30', Longitude 70°-46.48' was not determined for this reason.

Items not numbered

The charted 12 foot shoal in Latitude 43°-07.25', Longitude 70°-49.30' was developed by additional sounding lines. The least depth obtained was a pole sounding of 13.0 feet on rocky bottom. This sounding occurred 35 meters W of the charted 12 foot sounding. It is recommended that the present charted 12 foot sounding be retained. (Retained)

The charted 12 foot shoal in Latitude 43°-07.14', Longitude 70°-48.92' was found and developed. The least depth could not be verified by pole or handlead sounding because of the strong current at the time. The least depth found was a fathometer sounding of 10.4 feet, recorded as position 59 n. The character of the bottom was rocky as obtained by armed handlead. It is recommended that the present charted 12 foot sounding be replaced by this new, shoaler depth. (9' sdg. 110 m E. on line 13-14 s)

The charted 7 foot shoal in Latitude 43°-07.12', Longitude 70°-49.60' was investigated on hydrographic sheet H-8094, (FIELD NO. ECFP 1753). For results of the investigation see descriptive report for that sheet.

The charted 4 foot shoal in Latitude 43°-06.92', Longitude 70°-48.32' was found and developed. The least depth found was a pole sounding of 4.4 feet on rocky bottom, recorded as position 38 n. It is recommended that the 4 foot depth continue to be charted. (Retained on chart)

The charted 12 foot shoal in Latitude 43°-06.72', Longitude 70°-48.34', was found and developed by additional sounding lines and drift sounding. The least depth obtained was a pole sounding of 11.0 feet on rocky bottom, recorded as position 22 n. It is recommended that the present 12 foot sounding be deleted and this new, shoaler depth be added to the chart. (also 12-ft. depths 125 m. northeastward)

PRELIMINARY REVIEW BY CHART DIVISION (CHART NO. 329)

Item No. 12 The rock cribs which run NE from the N end of Wood Island are shown on Air Photo Compilation sheet No. T-11144 (1952), however this sheet shows only 5 such cribs. There are six cribs the sixth being located on line with, and NE of, the other five, all are equally spaced. These cribs are described in the sounding volumes. The rock crib in Latitude 43°-03.~~83~~ 78' Longitude 70°-4~~2.90~~ 1.94' is not shown on the Air Photo Compilation sheet. This crib was located by sextant fix and is recorded as position 4 v. There is no rock crib in Latitude 43°-03.82' Longitude 70°-42.63'. It is recommended that the existing rock cribs be charted. (charted)

Item No. 10 The charted 3 foot shoal at Latitude 43°-03.73' Longitude 70°-41.68' was developed by additional sounding lines. The least depth obtained was a pole sounding, recorded as position 1 da, of 3.0 feet on rocky bottom. It is recommended that this shoal continue to be charted as shown. (retained on chart)

The charted 6 foot shoal in Latitude 43°-03.61', Longitude 70°-41.48' was found and developed. The least depth obtained was a pole sounding, recorded as position 2 da, of 2.4 feet on rocky bottom. It is recommended that this new shoaler depth be charted. (charted)

The charted 16 foot shoal in Latitude 43°-03.51' Longitude 70°-41.54' was investigated by additional sounding in this area. Although not verified by a pole or handlead sounding, the shoalest sounding obtained in the area was ~~10.8~~ 11.0 feet ~~which occured 40 meters S of the charted 16 foot sounding.~~ Review, par. 6A. It is recommended that this new shoaler depth be charted. Several uncharted shoal soundings which should be added to the chart, occur 80 meters east of this position. (charted)

Item No. 7 The rock awash referred to in Latitude 43°-03.54 Longitude 70°-41.06' was searched for at a time when there was approximately 1.5 feet of tide. There is no rock awash at this location, however a sunken rock, 5 meters in diameter and covered 2.8 feet at MLW, was found 25 meters W, this rock was located and is recorded as position 55 w. It is recommended that this sunken rock be charted as it is the farthest offshore danger immediately east of White Island. Sunken rk. symbol now charted

Item No. 6 The charted 22 foot sounding at Latitude 43°-03.56' Longitude 70°-40.87' was investigated by additional sounding. A Depth~~s~~ of 2~~5~~0 feet ~~were~~ was obtained ~~at~~ near this position. A shoaler area was discovered 50 meters SE and this was developed. The least depth obtained was a hand lead sounding of 21.8 feet on rocky bottom, this sounding is recorded as position 7 ca. Slightly shoaler depths were obtained on sounding lines in this area but could not be verified by handlead soundings due to the jagged bottom. It is recommended that the 22 foot sounding be deleted and the new, shoaler depths be charted. 20 ft. now charted (95-96t)

Item No. 8 The charted, 17 foot shoal in Latitude 43°-03.6~~2~~1' Longitude 70°-40.~~30~~ 28' was investigated by additional sounding in this area. A least depth of 12.~~6~~ feet, on sandy bottom, was obtained with handlead and recorded as position 67 u. It is recommended that this new, shoaler depth be charted. (12 now charted) There is no evidence of any 6 foot depths in this area as reported in 1889. (also 12 ft. 60 m. S.W. of pos. 67u on line 61-62u)

The charted 5 foot sounding in Latitude 43°-03.76' Longitude 70°-40.45' is in error. A rock, bare 1.0 foot at MLW actually exists at this position. The location of this rock is recorded as position 125 u. It is recommended that this sounding be deleted and a rock awash charted at this position. (accomplished)

The charted 15 foot shoal in Latitude 43°-03.78' Longitude 70°-40.53' was investigated by additional sounding. Shoaler soundings were obtained just south of this 15 foot sounding. It appears that the shoal called West Sister is more extensive than charted and is continuous rather than three unconnected shoals as charted. It is recommended that the charting of the West Sister be revised to agree with this survey. (chart now in general agreement w/survey)

Item No. 9 No evidence of the charted 12 foot shoal in Latitude 43°-03.93' Longitude 70°-40.35' was found on the sounding lines or while drift sounding in this area for approx. 15 minutes, however, shoaler depths than charted were found 100 meters NW. The least depth obtained was a handlead sounding of 8.4 feet on rocky bottom. This sounding is recorded as position 78 y. It is recommended that the 12 foot sounding be deleted from the chart and replaced by the new shoaler soundings to the NW. Review, par. 6 A.

Item No. 3 The area in the vicinity of Latitude 43°-03.13' Longitude 70°-40.40' was closely developed by additional sounding lines. No evidence of this 46 foot sounding was found. It is recommended that this sounding be deleted from the chart. Review, par. 5

Item No. 4 The 29 foot sounding in Latitude 43°-03.08' Longitude 70°-41.02' appears to be in error. This area was developed by additional sounding. The least depth obtained was a handlead sounding of 20.6 on rocky bottom, recorded as position 80 da. Shoaler soundings than charted were also found 100 meters NNW. It is recommended that this sounding be deleted from the chart and replaced by the new shoaler soundings. 20 ft. now charted

Item No. 5 The charted 18 foot shoal in Latitude 43°-03.23' Longitude 70°-40.90' was closely developed by additional sounding lines. Although 25 minutes was spent drift sounding in this area the shoalest sounding obtained was a handlead sounding of 2~~4~~2 feet on rocky bottom, recorded as position ~~69-70 z~~ ~~6 aa.~~ In view of the fact that 18 foot depths were found here by wire drag and the extreme jaggedness of the bottom in this area, it is recommended that the 18 foot depth continue to be charted. 18 retained from H-3976 W.D. (1917)

Item No. 2 The 33 foot sounding in Latitude 43°-02.89' Longitude 70°-4~~3.22~~ ~~18~~ was investigated by additional sounding lines and drift sounding. ~~No~~ evidence of this 33 foot depth was found. The shoalest sounding obtained was a hand lead sounding of (34.5) feet, recorded as position 78 da, on rocky bottom. This sounding occurs 50 meters NW of the charted 33 foot sounding and is apparently a new location of the charted 35 foot shoal mentioned in the review. It is recommended that the charted soundings in this area be revised to agree with this survey. 32 ft. reduced 31 ft. closeby, shoalest depth

The charted 35 foot shoal in Latitude 43°-02.98' Longitude 70°-40.86 was found as charted. The shoalest sounding obtained was a handlead sounding of 3~~4.3~~4 feet on rocky bottom, recorded as position 79 da. It is recommended that this shoal continue to be charted as shown except for a least depth of 3~~4~~3 feet rather than 35. (33 now charted)

The charted shoal in Latitude 43°-03.07' Longitude 70°-41.52' was found and developed. The development showed other shoal soundings 90 meters east. The shoalest sounding obtained was a handlead sounding of *19.0 feet on rocky bottom, recorded as position 117 da. It is recommended that the present soundings be retained and the new shoal soundings to the east be added to the chart. * 18 between 41-42 z (18 now charted)

The charted 11 foot shoal called Kitts Rock at Latitude 43°-03.23' Longitude 70°-41.53' was found to be essentially as charted, except that the shoalest depth found occurred 40 meters NNW of the charted position. The least depth found was a handlead sounding of 10.8 feet on rocky bottom. This sounding is recorded as position 2 ca. It is recommended that the charted soundings in this area be revised to agree with this survey.

The charted 14 foot shoal in Latitude 43°-03.28', Longitude 70°-41.20' was found and developed. The shoalest sounding obtained was a fathometer sounding of 13.6 feet between positions 34 and 35 w. Due to the jaggedness of the bottom this sounding could not be verified with the handlead. It is recommended that this new shoaler depth be charted. (13 charted)

DANGERS AND SHOALS Several new dangers and shoals, at present uncharted, were found during the survey as follows:

A reef in Latitude 43°-07.20', Longitude 70°-48.~~55~~63' was found and its limits determined by positions 15, 16 and 17 k. This reef is composed of many small rocks covered with seaweed which was just awash at the time of location. The north end of this reef is just awash at MLW and the south end is covered by 1.7 feet at MLW.

Two rocks in Latitude 43°-03.52', Longitude 70°-41.62' were found, located and recorded as positions 5 and 6 v. These rocks are each 5 meters in diameter and bare 1.2 feet at MLW. (now charted as one rock)

Six foot depths were found in Latitude 43°-03.55', Longitude 70°-40.58', 100 meters NW of the shoalest sounding on Phillips Rock. Chart 329 shows 10 foot depths in this area. (6 ft. shoal now charted)

A small shoal was found in Latitude 43°-03.48', Longitude 70°-40.99'. A pole sounding of 6.2 feet on rocky bottom was the least depth found. This sounding is recorded as position 110 y. (charted)

A new shoal in Latitude 43°-03.87', Longitude 70°-40.72' was found and developed by additional sounding. The least depth found was a hand lead sounding of 14.8 feet on rocky bottom, recorded as position 92 y. Chart No. 329 shows 24 foot depths in this area. (15 now charted)

It is recommended that all the above listed dangers and shoals be added to the chart.

COAST PILOT INFORMATION Submitted as a special report dated 23 October 1953.

A-305/53
Gary
8/4/55

LANDMARKS FOR CHARTS The following additional landmarks should be charted on charts 329 and 1206. (See form 567)

Two concrete watch towers on SE shore of Gerrish Island. (Hydrographic signals POP and WEN)

Elevated tank now under construction at Simplex Wire and Cable Company. Completed tank to be 70 feet in elevation. Position of this tank is shown on the boat sheet. & smooth sheet.

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

MISCELLANEOUS A new pier, incomplete at the closing of the field season, is being constructed for the Simplex Wire and Cable Company on the south shore of the Piscataqua River in Latitude 43°-06.15' Longitude 70°-47.55'. A three point sextant fix was taken on the upstream outer corner of the dock and is recorded on pg. 60 of sounding vol. 9, a sketch of this dock also appears in the sounding volume showing dimensions and the point located. Prints forwarded to Washington Office 17 September 1953 will be needed for the azimuth of the* pier in plotting on the smooth sheet. C.L.808 & Bp.50553 (1953) C.L.880/53

A tank, also incomplete, inshore from the above dock was located by traversing from a three point fix on the shore. The position of this tank is shown on the boat sheet. This tank is to be an elevated tank and should be charted as a landmark. Tank shown on smooth sheet. 2-12-76 HR

* pier shown in red on smooth sheet & is now charted

Respectfully Submitted,

Robert B. Noble

Robert B. Noble
ENS., USC&GS

Approved and forwarded,

Clarence R. Reed

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

TIDE NOTE TO ACCOMPANY

HYDROGRAPHIC SURVEY SHEET H-8092 , (FIELD NO. ECFP 1553)

Portable automatic tide gages were maintained at Newington, Atlantic Heights, Fort Constitution and Jaffrey Point, New Hampshire. No differences of time or height were applied to the observed tides. Planes of reference were furnished by the Washington Office or computed from elevations of previous tidal bench marks.

STATION	LATITUDE	LONGITUDE	MLW ON STAFF
Newington, N.H.	43°-06.92'	70°-48.70'	2.6'
Atlantic Hgts., N.H.	43°-05.37'	70°-45.92'	4.6'
Fort Constitution, N.H.	43°-04.30'	70°-42.67'	2.5'
Jaffrey Point, N.H.	43°-03.44'	70°-42.94'	1.9'

FATHOMETER CORRECTIONS

PROJECT CS-355

HYDROGRAPHIC SURVEY SHEET H-8092 , (FIELD NO. ECFP 1553)

The corrections tabulated below are based on an initial set at zero on the fathogram. Where the initial varies from zero on the fathogram INDEX CORRECTIONS must be entered in the sounding volumes.

Launch 82

FATHOMETER NO. 150 SPX

28 May - 12 August 1953

Correction	Depth	
A Range	From	To
+0.4	0.0	5.0
+0.2	5.1	19.0
0.0	19.1	27.5
-0.2	27.6	36.5
-0.4	36.6	48.0
-0.6	48.1	55.0
B Range		
-1.4	all depths	

Launch 82

FATHOMETER NO. 67

13 August 1953 only

Corrections	Depth	
A Range	From	To
+0.6	0.0	23.0
+0.8	23.1	41.0
+0.6	41.1	55.0
B Range		
+0.4	35.0	74.0
+0.2	74.1	85.0
0.0	85.1	90.0

Launch 82

FATHOMETER NO. 138 SPX

14 August - 18 September 1953

Corrections	Depth	
A Range	From	To
+0.6	0.0	5.0

FATHOMETER NO. 138 SPX (CONT'D)

Corrections	Depth	
A Range	From	To
+0.4	5.1	14.0
+0.2	14.1	24.0
0.0	24.1	33.0
-0.2	33.1	42.0
-0.4	42.1	50.0
-0.6	50.1	55.0
B Range		
-.30	35.0	57.0
-3.2	57.1	90.0
C Range		
-5.2	all depths	

FLOATING AIDS TO NAVIGATION
H-8092

BUOY	LAT.	MET.	LONG.	MET.	DEPTH	POS. NO.	DATE
Kitts Rock Lighted Whistle Buoy 2KR	43-02	1771.5	70-41	678.0	51'	109v	8-17-53
West Sister Buoy 2	43-03	1088.0	70-40	280.0	33'	35t	8-13-53
Piscataqua R. Buoy 1	43-06	1694.0	70-48	753.0	17'	68h	6-10-53
Piscataqua R. Buoy 2	43-06	1743.0	70-48	547.0	39'	67h	6-10-53
Piscataqua R. Buoy 3	43-07	342.0	70-48	1206.0	30'	25f	6-5-53

LIST OF SIGNALS
To Accompany
H-8092

TRIANGULATION STATIONS

BACK	WHALEBACK LIGHTHOUSE, 1878-1941
CAST	WENTWORTH HOUSE CUPOLA, 1878
JEFF	JAFFREY POINT DAYBEACON, 1953
PIPE	CAMP LANGDON STANDPIPE, 1941
POINT	PORTSMOUTH HARBOR LIGHTHOUSE, 1878-1941
POLE	FORT STARK FLAGPOLE, 1941
WEST	NEWINGTON R.R. STA., N.W. CHY., 1908
WHEB	WHEB RADIO TOWER, 1941-43
WOOD	WOOD ISLAND COAST GUARD CUPOLA, 1917-43

TOPOGRAPHIC STATIONS

SOURCE T-11168

Den How Nod

SOURCE, AUX. PHOTO. SHEET
G.C. E<FP Aa-53

Red

SOURCE, T-11141

Fix

SOURCE, T-11143

Ace	Axe	Ban	Bar	Bob	Boy	Con	Doc	Dog	Don	Dud
Ear	Elm	Ess	Fat	Fly	Fox	Gab	Hat	Her	Him	Joe
Jim	Jut	Ken	Led	Lid	Lot	May	Moo	Mud	Ned	Nob
North	Oak	Oil	Par	Pie	Rub	Rum	Sam	Sin	Son	South
Sue	Ten	Tom	Top	Tow	Val	Vic	War	Way	Wit	Yel
Zip										

SOURCE, T-11144

Aim	Bed	Bud	Bun	Cat	Doc	Dew	Dor	Egg	Fin	Foe
Guy	Hay	Hub	Hut	Ice	Mac	Man	Nat	Net	New	Nut
Pig	Ply	Pop	Put	Ram	Rib	Rip	Sod	Tar	Tax	Wen
Wow	Zag									

SOURCE, T-11146

Jud Sid Tac

SOURCE, T-11147

Cro

HYDROGRAPHIC STATIONS

Lip Vol. 4, pg. 49

STATISTICS TO ACCOMPANY HYDROGRAPHIC SHEET H-8092
(FIELD NO. ECFP 1553)

Date 1953	Day Ltr.	Launch Vol. No.	Lead Lines	Pole Sdgs.	No. of Positions	Stat. Mi. Sdg.
28 May	a	1	—	42	98	9.4
29 May	b	1	—	36	87	8.1
1 June	c	1&2	—	52	75	8.6
2 "	d	2	—	—	50	5.3
3 "	e	2	—	29	67	6.4
5 "	f	2	—	10	25	2.3
9 "	g	2&3	—	16	108	10.0
10 "	h	3	2	60	101	6.2
11 "	j	3&4	2	3	62	4.9
16 "	k	4	12	2	32	0.0
17 "	l	4	8	2	19	0.0
18 "	m	4	—	1	4	0.2
1 July	n	4	—	9	66	3.1
24 July	p	4&5	5	—	95	10.4
5 Aug.	q	5	2	—	2	0.0
11 "	r	5	—	—	90	13.8
12 "	s	5	—	—	23	2.7
13 "	t	5&6	1	—	60	8.2
14 "	u	6	—	—	138	16.0
17 "	v	6&7	4	—	117	15.0
18 "	w	7	1	—	56	5.1
19 "	x	7	—	—	8	0.0
21 "	y	8	4	3	112	8.5
25 "	z	8	—	—	139	12.0
27 "	aa	9	—	—	23	1.1
8 Sept.	ba	9	68	12	13	1.4
17 "	ca	9	7	—	7	0.0
18 "	da	9	6	2	130	11.4
TOTALS			122	279	1807	170.1

Area Surveyed 3.5 square stat. miles

APPROVAL SHEET

HYDROGRAPHIC SURVEY H-8092

The records and boat sheets for Hydrographic Survey H-8092 have been inspected by me and are approved.

Clarence R. Reed

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

Wash. office

SUPPLEMENT TO DESCRIPTIVE REPORT

(Field Party Notes From Boat Sheet)

HYDROGRAPHIC SHEET ECFP-1553(H-8092)

MAINE & NEW HAMPSHIRE

Piscataqua River from Dover Point to Nobles Island &
Portsmouth Harbor Entrance outside Wood Island

1953 & 1954

Chief of Party - Clarence R. Reed

NOTES FOR SUPPLEMENTAL DESCRIPTIVE REPORT

To Accompany Hydrographic Sheet (H-8092) (Field No. ECFP-1553)

Piscataqua River from Dover Point to Nobles Island,
& Portsmouth Harbor Entrance Outside Wood Island

EAST COAST FIELD PARTY CLARENCE R. REED, CHIEF OF PARTY

PROJECT CS-355 1953 & 1954 SCALE 1:10,000

* * * * * * * * * * * * * *

PROJECT This survey was accomplished under instructions dated 6 March 1953, supplemental instructions dated 29 January 1954, and a letter dated 2 April 1954 (Subject: Additional Field Work in Areas Surveyed in 1953)

VESSELS AND EQUIPMENT For the supplemental field work done on this sheet in 1954, a catamaran was used. It consisted of two aluminum skiffs (one 16', the other 14') held rigidly parallel to one another approximately 1½' apart by bolts to two 2"X 6" planks and a 2"X 4" which were laid across the skiffs. Echo soundings were obtained with graphic recorder no. 77. The transducers were mounted in a fish which was secured between the skiffs.

TIDES AND CURRENTS No tide gages were established for the supplemental hydrography. Tides were furnished by the Washington Office.

CONTROL STATIONS Control signals established in 1953 were recovered and used to control hydrography in 1954.

COMPARISON WITH CHART 229 Additional search was made for the 1' shoals charted at Lat. 43 06.88' Long. 70 48.53', and Lat. 43 06.83' Long. 70 48.51', and no indication of 1' depths was found. On the first one, a 4.5 depth was found, and on the latter a 6' depth was found. It is recommended that these new depths be charted. ↑ pos. 2-3a ↑ Review, par. 5 (D.P. 2 & online 10-11a)

MISCELLANEOUS Since the supplemental survey on this sheet was very small, and took place on a crowded section of the boat sheet, an auxillary boat sheet was traced on a piece of tracing paper and used to plot the positions. Only the shoalest soundings were inked on this sheet, because the area had been covered with closely spaced sounding lines in the summer of 1953. This sheet will be submitted with the boat sheet.

Respectfully submitted

Charles E Horne

Charles E. Horne cer
ENS. USC&GS

Approved and forwarded,

SEE NOTE ON "APPROVAL SHEET"

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

Clarence R. Reed

SUPPLEMENTAL FATHOMETER CORRECTIONS

The corrections listed below are based on an initial set at zero on the fathogram. Where the initial varies from zero on the fathogram index corrections must be entered in the sounding volume.

FATHOMETER NO. 77

2 September 1954

Catamaran

DEPTH		CORRECTION
From	To	A Range
0.0	3.8	+1.0
3.9	8.4	+0.8
8.5	24.0	+0.6
24.2	Limit of A Range	+0.4

1954

SUPPLEMENTAL STATISTICS TO ACCOMPANY

Hydrographic Sheet H-8092(Field No. ECFP 1553)

Catamaran
Fathometer 77

DATE 1954	DAY LTR	VOL. NO.	LEAD LINES	NO. OF POS.	STAT.MI. OF SDG. LINE
2 Sept.	a	1	0	21	1.5
		TOTALS	0	21	1.5

Sq. stat. mi. of Area: .08

APPROVAL SHEET FOR ADDITIONAL WORK

IN 1954 ON HYDROGRAPHIC SURVEY H-8092

The 1954 records and boat sheet for Hydrographic Survey H-8092 (ECFP-1553) have also been inspected by me and are approved.

It should be noted that a close examination of the area in the vicinity of the charted 1 foot soundings near Latitude 43° 06.8', Longitude 70° 48.5'at a time of minus 1.1 feet of tide on 15 September 1954 failed to reveal any rocks close to the surface. It is recommended that the new depths be charted, in place of the present 1 foot depths. (Concur)

Clarence R. Reed

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

ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8092 (Field No. ECFP-1553)

GENERAL

This appears to be an excellent basic survey and no unusual problems were encountered during the smooth plot.

DETACHED POSITIONS

Detached positions 21 thru 25k (blue), were located on weak fixes. These positions were not smooth plotted as it is believed a more accurate determination can be made by using these fixes along with the air-photos to locate these rocks.

Rks. located by above positions could not be identified on air photos. As fixes were swingers, the boat sheet positions were accepted.

Respectfully submitted,

Hugh L. Proffitt
Cartographer.

Norfolk, Va.
16 June 1955

1953

May June July Aug Sept Oct Nov

H-8092 1/10

L82 F150

L82 F67

L82 F136

H-8090 1/5

L82 F150

L82 F138

L82 F67

H-8091 1/10

L82 F138

H-8097 1/10

L168 F67

L82 F138

H-8096

L168 F139

L168 F67

L82 F138

7
L168 F138

L168 F67

H-8095

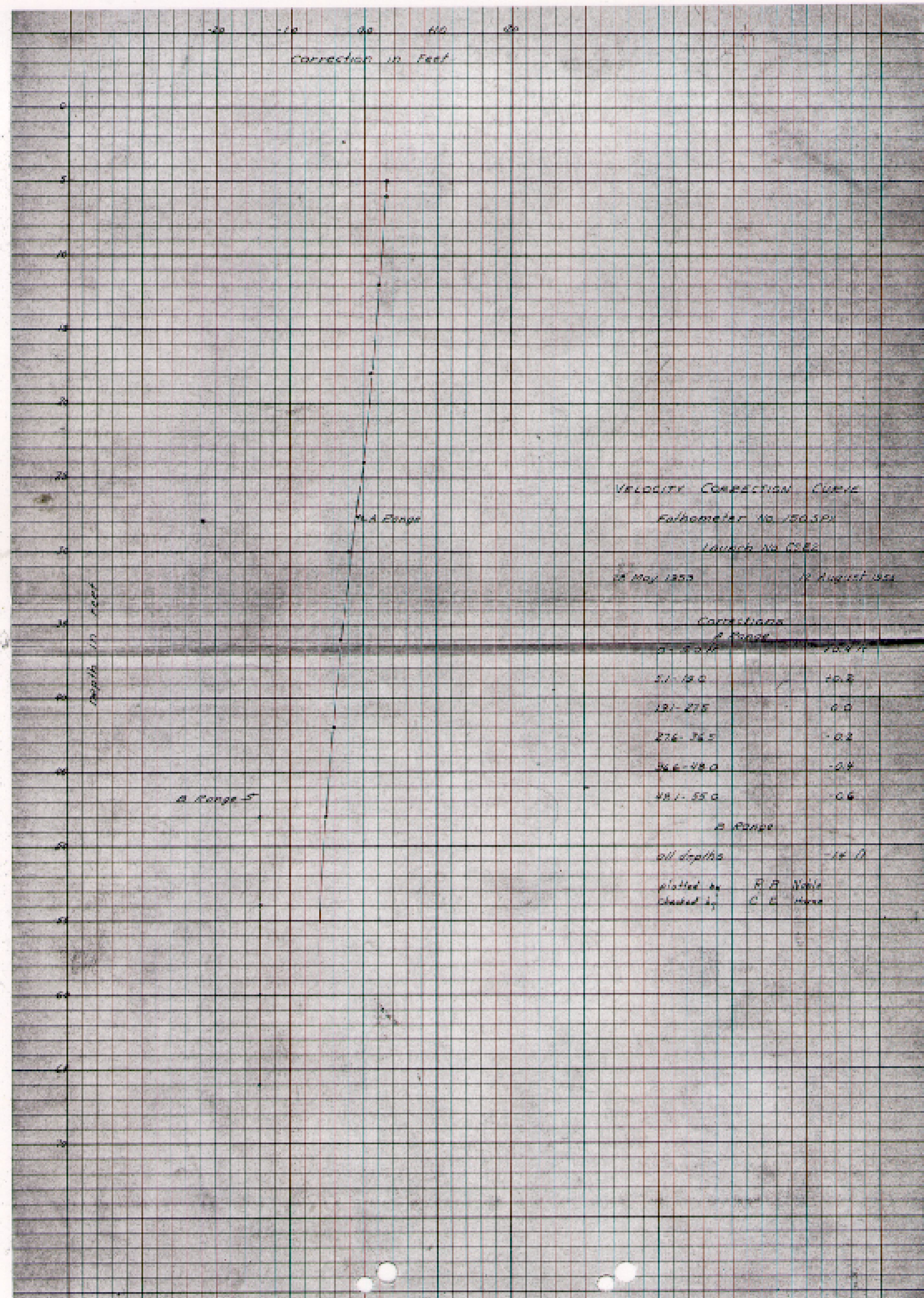
12
L168 F138

13
L168 F139

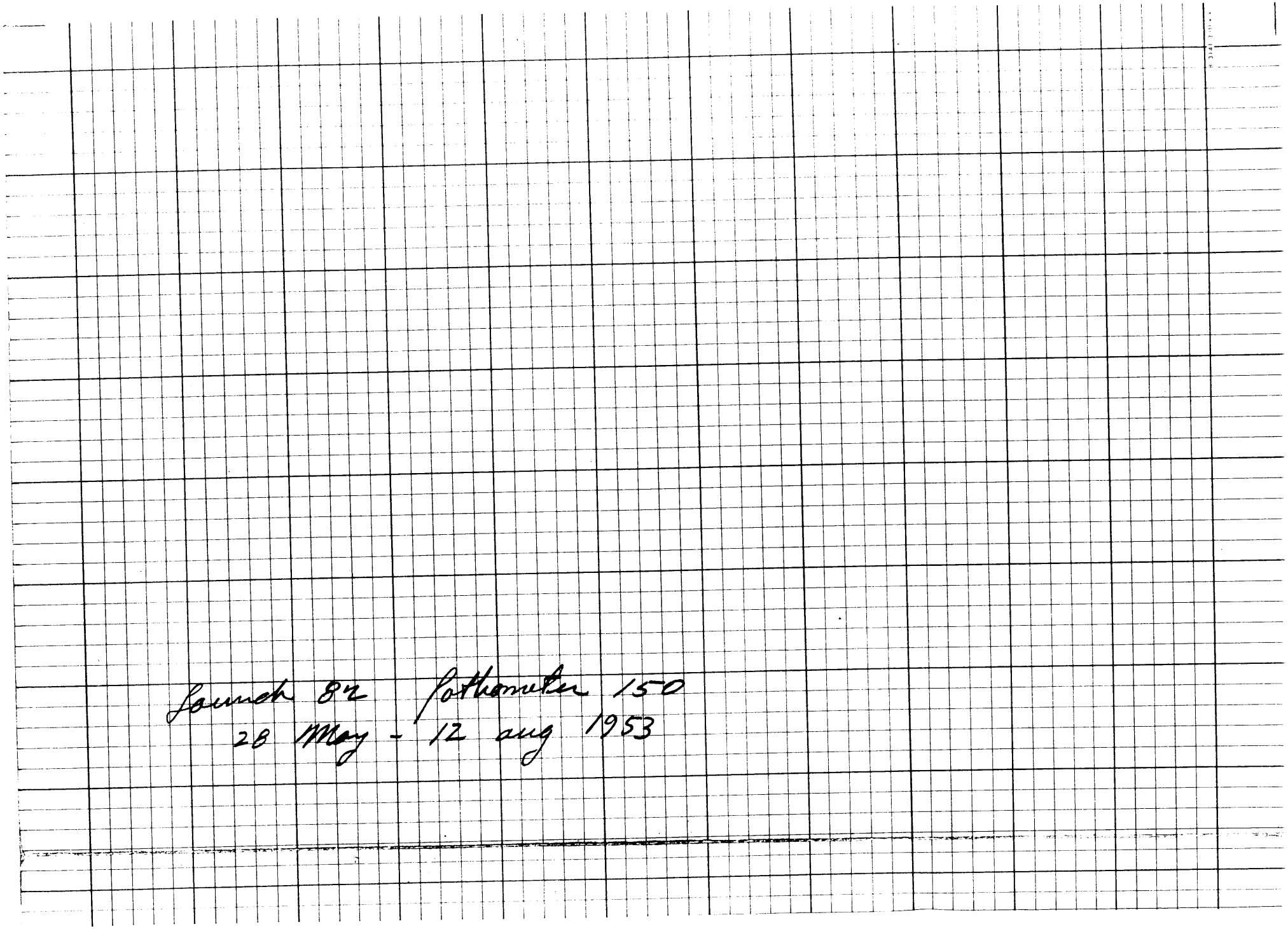
Fathometers and Launches
used on various sheets

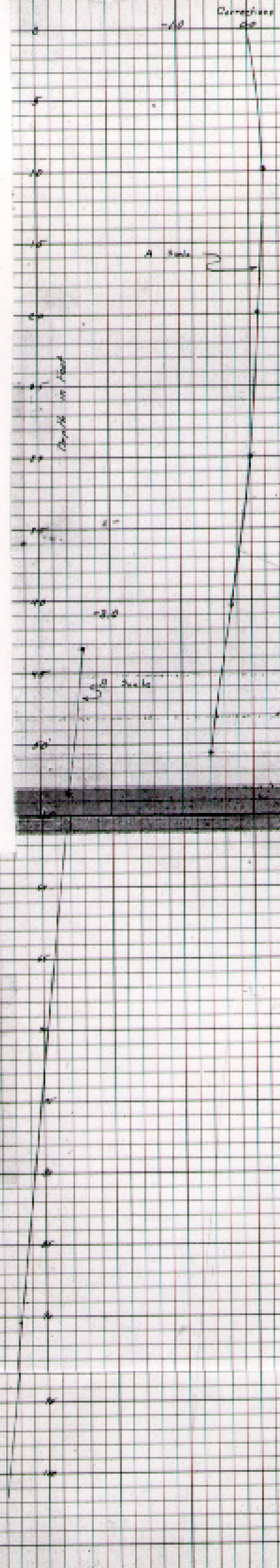
1954

	May	June	July	Aug	Sept	Oct	Nov
H-8092 1/10					2 Cat F77		
H-8090 1/5				18 19 L82 F77	3 7 9 Cat F77		2-5 Skiff F77
H-8091 1/10							
H-8097 1/10		23 24 25 L82 F119; 26 L82 F77	8 9 13 14 15				
H-8096	19 20 21 24 25 L82 F119	[illegible]	1 2; 7 8 L82 F77; 23 24 Cat F119				
H-8095		L82 F119 1 2 8 10 11 14 15 16 17	1 2				



Correction in Feet
Depth in Feet
A Range
B Range
VELOCITY CORRECTION CURVE
Fathometer No. 150 SPI
Launch No C522
May 1953
August 1953
Corrections
A Range
21 - 19.0 +0.2
19.1 - 27.5 0.0
27.6 - 36.5 -0.2
36.6 - 48.0 -0.4
48.1 - 55.0 -0.6
B Range
all depths -1.4 ft
plotted by R. B. Noble
Checked by C. E. Horne


launch 82 Pathometer 150
28 May - 12 aug 1953



Velocity Corrections

C&GS [illegible] project CS 385
July 22 to Aug 30 [illegible]
Fathometer No. 178 [illegible]

Sheet 1453

plotted by [illegible]

Corrections (A scale)

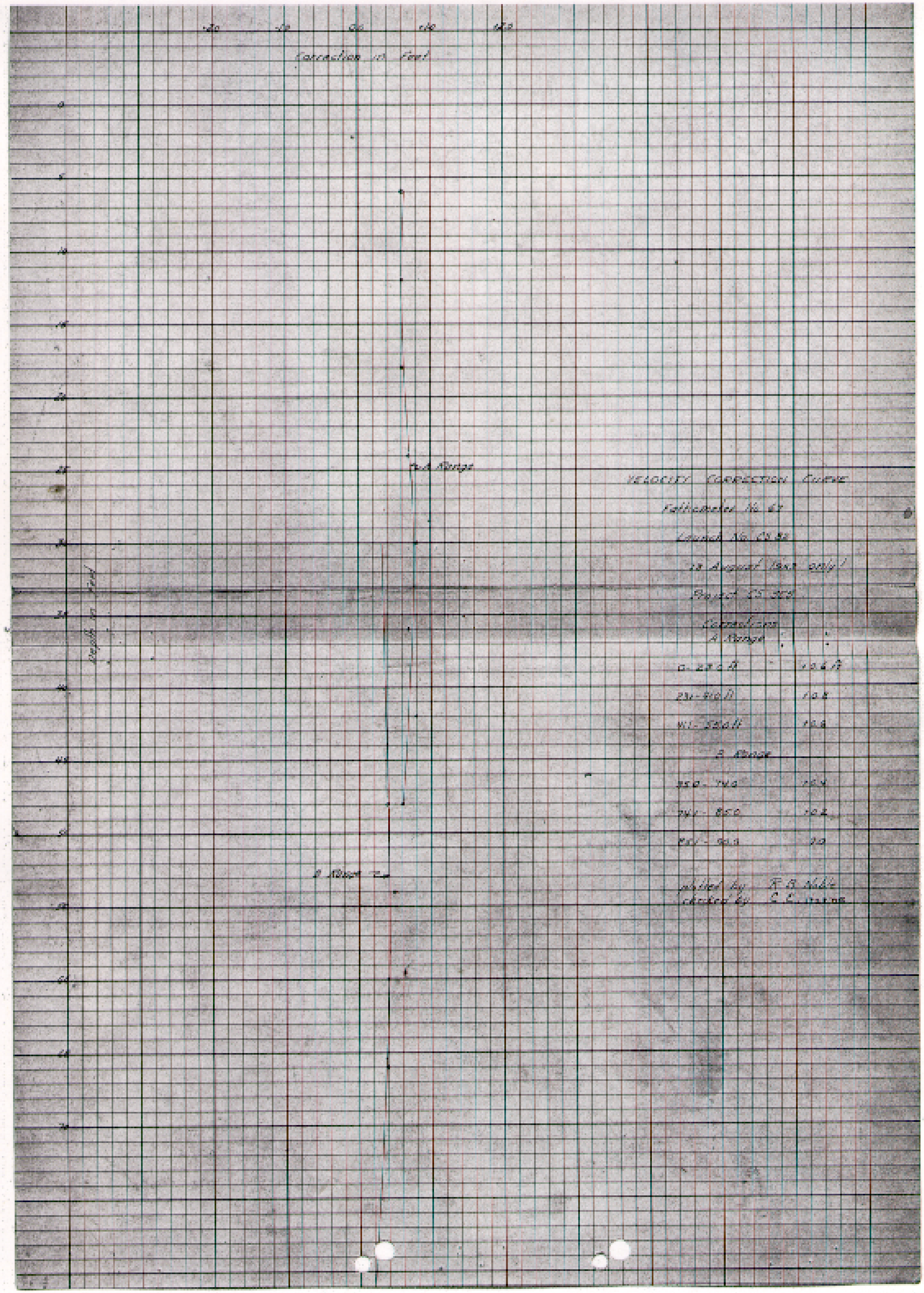
Depth from	Depth to	Correction
2.5	22.6	+ 0.5
22.6	29.5	0.0
29.6	41.5	-0.5
41.6	49.6	-0.9
49.7	limit of A scale	-0.4

Corrections (B scale)

Depth from	Depth to	Correction
40.0	48.8	-2.8
48.9	[illegible]	-3.6
[illegible]	67.0	-3.8
67.1	77.6	-4.0
77.7	87.0	-4.2
87.1	96.5	-4.4
96.6	106.0	-4.6
		-4

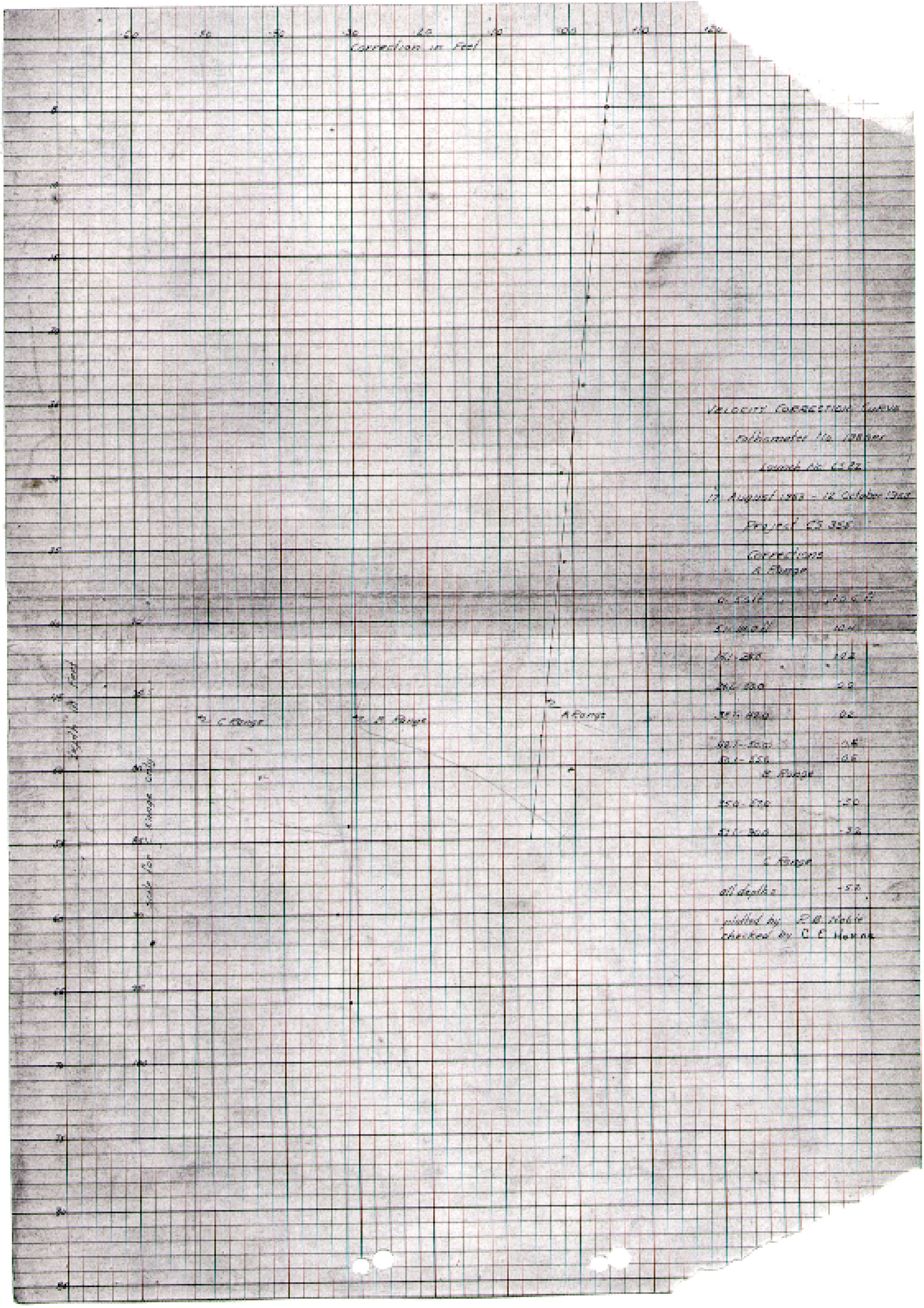
Launch 168 Pathometer 138

23 July - 20 aug 1953

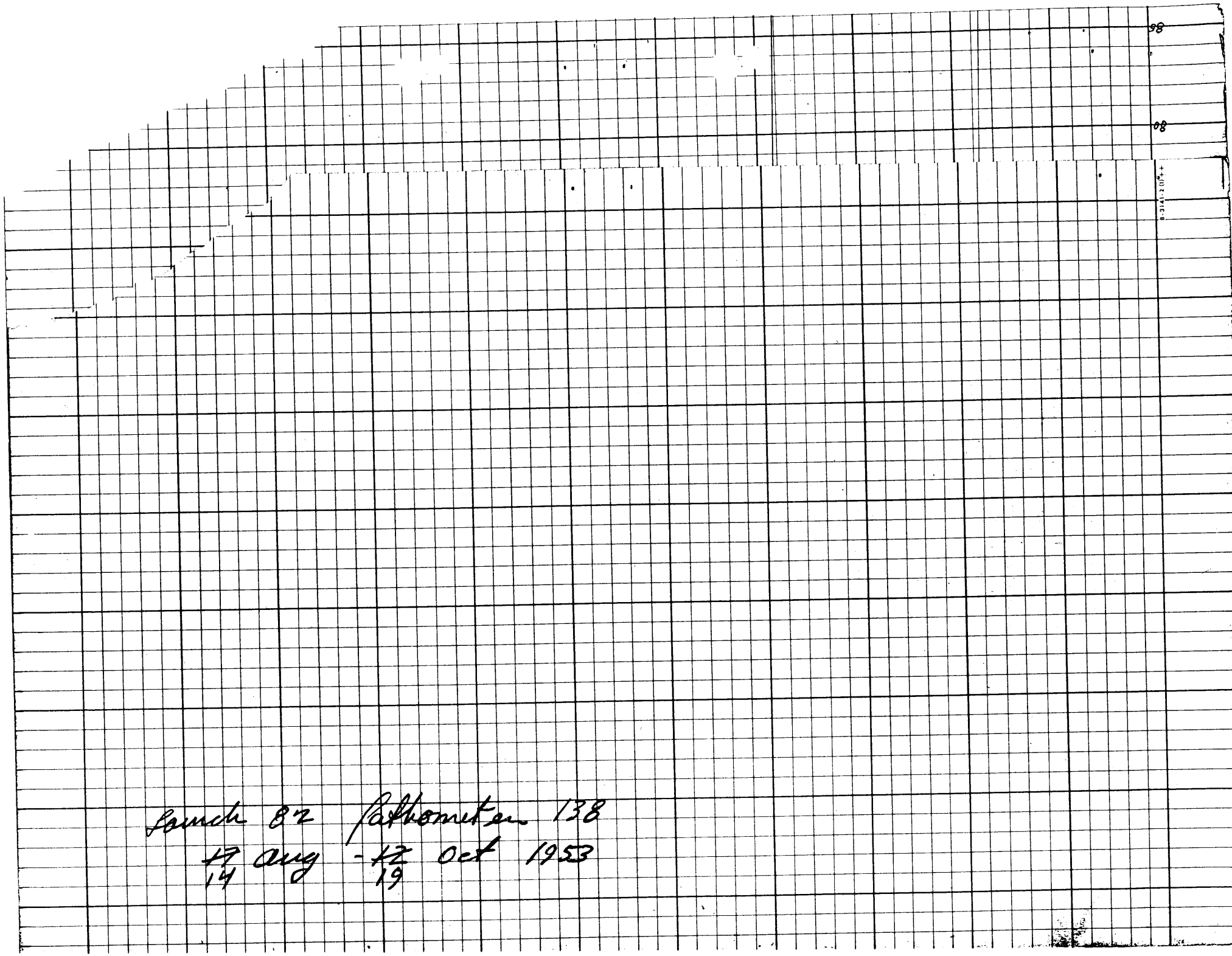


-2.0
-1.0
0.0
+1.0
+2.0
Correction in Feet
Depth in Feet
A Range
B Range
VELOCITY CORRECTION CURVE
Fathometer No. 67
Corrections
A Range
0 - 250 ft
251 - 410 ft
411 - 550 ft
+0.8
+0.6
B Range
550 - 740
741 - 850
851 - 900
+0.4
+0.2
0.0
plotted by
checked by

launch 82 fathometer 67
13 aug 1953 only



Correction in Feet
Depth in Feet
C Range
B Range
A Range
Velocity Correction Curve
Corrections
A Range
B Range
C Range
all depths
plotted by
checked by


launch 82 Pathometer 138
14 Aug - 19 Oct 1953

Velocity Corrections

ECSP project CS-355

Fathometer No 67

14 August to 14 October, 1953
Launch # 168

plotted by L.D. Kelley

sheet 1253

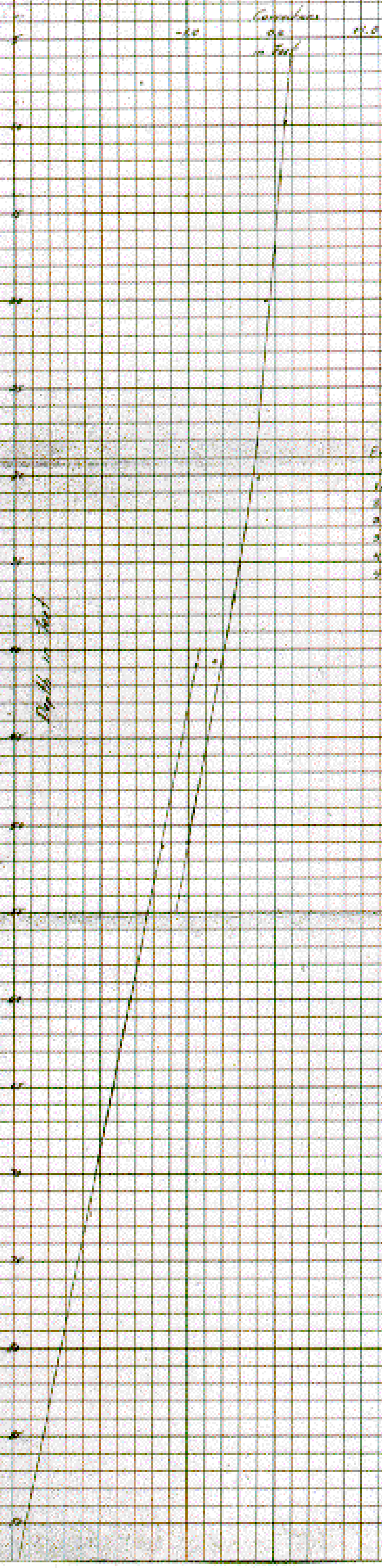
Corrections "A" scale

Depth From	to	Correction
0.0	10.0	+0.2
10.1	23.5	0.0
23.6	32.0	-0.2
32.1	37.5	-0.4
37.6	42.5	-0.6
42.6	48.5	-0.8
48.6	55.0	-1.0

"B" scale

Depth From	to	Correction
35.0	36.5	-0.6
36.6	41.0	-0.8
41.1	46.0	-1.0
46.1	51.0	-1.2
51.1	56.0	-1.4
56.1	61.0	-1.6
61.1	66.0	-1.8
66.1	71.0	-2.0
71.1	76.0	-2.2
76.1	81.0	-2.4
81.1	86.0	-2.6
86.1	91.0	-2.8
91.1	95.0	-3.0
95.1	100.0	-3.2


Launch 168 Rathometer 67
14 aug – 14 oct 1953



Velocity Corrections

C&GS Project CS 355

Fathometer #67

1st August to 14 October 1953
Launch #148

plotted by LDB

sheet 1253

Corrections

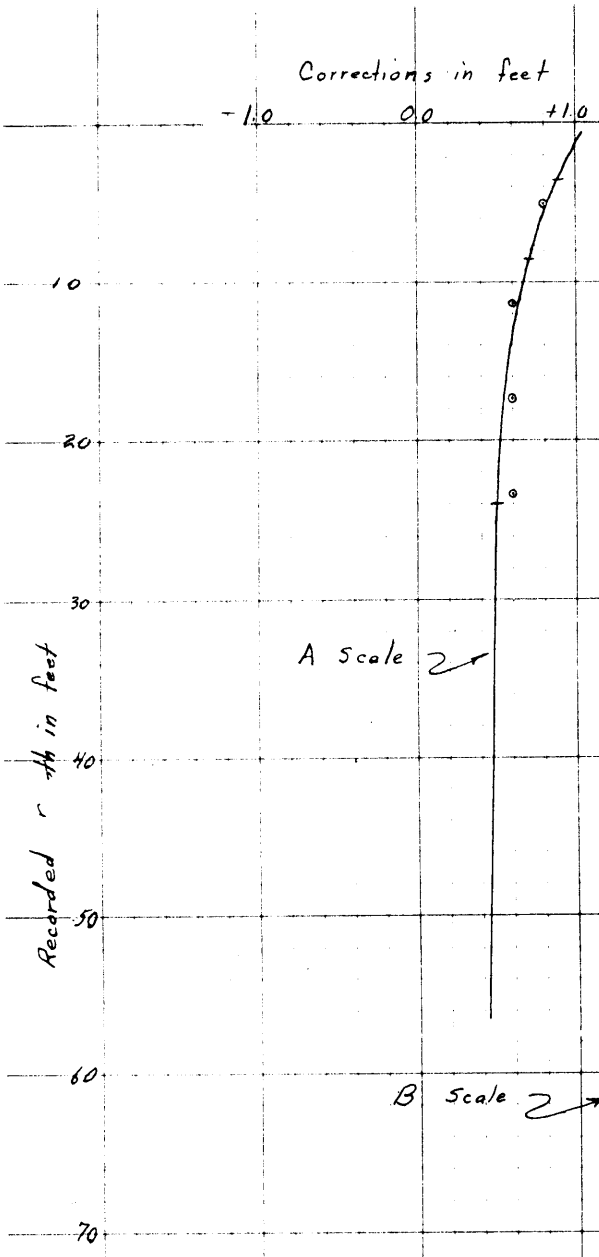
"A" Scale

Depth From	Depth to	Correction
6.0	14.0	+0.2
14.1	22.0	0.0
22.1	32.0	-0.2
32.1	37.5	-0.3
37.6	42.5	-0.6
42.6	47.5	-0.8
47.6	55.0	-1.0

B Scale

Depth From	Depth to	Correction
35.0	35.6	-0.6
35.6	41.0	-0.8
41.1	45.0	-1.0
45.1	50.0	-1.2
50.1	55.0	-1.4
55.1	60.0	-1.6
61.1	66.0	-1.8
66.1	71.0	-2.0
71.1	76.0	-2.2
76.1	81.0	-2.4
81.1	86.0	-2.6
86.1	91.0	-2.8
91.1	95.0	-3.0
95.1	102.0	-3.2

Launch 148 Fathometer 67
1st Aug - 14 Oct 1953



Velocity Correction Curve
for fathometer #77

Catamaran

East Coast Field Party
Cmdr. C.R. Reed Chief of Party

Project CS-355
1954 Field Season
3 September - 9 September

Comp. & Plotted by C.E. Horne Chk. by R.A.L.

Corrections

A Range

Depth	Correction
0.0 - 3.8	+ 1.0
3.9 - 8.4	+ 0.8
8.5 - 24.0	+ 0.6
24.2 - Limit of A Range	+ 0.4

B Range

35.0 - 70 +	+ 1.2

GEOGRAPHIC NAMES

Survey No. H-8092

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	K U.S. Light List	
Maine					(for title)				BGN	1
New Hampshire					(" ")				"	2
Portsmouth Harbor Entrance					(" ")					3
Portsmouth Harbor					(" ")					4
Chauncey Creek ✓										5
Gerrish Island ✓										6
Wood Island ✓										7
White Island ✓		see chart 329 for								8
Phillips Rock ✓		placement, after inking								9
Jaffrey Point ✓			(tide station)						BGN	10
Little Harbor ✓										11
Sagamore Creek ✓										12
Fort Constitution			(tide station)							13
Nobles Island ✓										14
Spinney Creek										15
Spruce Creek ✓										16
Piscataqua River ✓										17
Atlantic Heights			(tide station)							18
Boiling Rock ✓										19
Newington			(tide station)							20
Dover Point ✓										21
HORN I. ✓										22
WEST SISTER ✓				Names approved						23
KITTS RKS ✓				7-5-55 L. Heck						24
										25
										26
										27

M 234

FORM 537a
(9-24-47)

DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

REGISTER NO. T -

TOPOGRAPHIC TITLE SHEET

FIELD NO. ECFP-Aa-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: Piscataqua River

LOCALITY: Spruce Creek

SCALE: 1/10,000

DATE OF SURVEY: July, 19 53

VESSEL: East Coast Field Party

CHIEF OF PARTY: Clarence R. Reed

VEYED BY: Robert B. Noble

INKED BY: Robert B. Noble

HEIGHTS IN FEET ABOVE MHW OR _____ ☐ TO GROUND ☐ TO TOPS OF TREES

CONTOUR APPROXIMATE CONTOUR FORM LINE INTERVAL _____ FEET

PROJECT NUMBER: CS-355

REMARKS

This graphic control survey sheet will be destroyed subsequent to the review of H-8092 & H-8094 as all useful information has been transferred to the the hydro survey sheets

J. A. Dinsmore
Nov. 1956

12136

DESCRIPTIVE REPORT
TO ACCOMPANY

GRAPHIC CONTROL SHEETS
Project CS-355, Ipswich Bay, Mass. to Piscataqua River, N.H.

SHEETS

FIELD NO. ECFP-Aa-53	1:10,000- 1953
FIELD NO. ECFP-Ab-53	1:10,000- 1953

CONTROL

The control on sheet FIELD NO. Aa-53 consisted of photo - hydro stations PIG and CAT and one triangulation station, KITTERY NAVY YARD TANK, 1943. The photo - hydro stations were located by field radial plot by the photogrammetric party of Mr. J.C. Lajoye and transferred to the graphic control sheet from Shoreline Manuscript No. T-11144. On sheet FIELD NO. ECFP-Ab-53 three photo hydro stations FID, NAY and ARM were transferred from Shoreline Manuscript No. T-11139.

METHODS USED

On sheet FIELD NO. ECFP-Aa-53 the planetable was located by setting up on range with photo hydro station CAT and the KITTERY NAVY YARD TANK, and resecting from photo hydro station PIG. A 1975 meter traverse was run up the west shore of Spruce Creek to locate hydrographic signals and shoreline. The traverse was not closed as there was no triangulation or other control in the area. The traverse was checked by several shots downstream to photo hydro station CAT which seemed to verify the azimuth of the planetable. At one set up, in the vicinity of signal ICE, resection from station PIG verified the position of the planetable closely.

On sheet FIELD NO. ECFP-Ab-53 the location of the plane table was accomplished by setting up on range with photo hydro stations FID and GIN and resecting from station ARM. Stadia distance from ARM verified the position of the plane table. A 1425 meter traverse was run, mostly on the east shore, up the Salmon Falls River to locate hydrographic signals and shoreline. This traverse was not closed at the north end as there was no triangulation or other control in the area.

SHEET COVERAGE

Each sheet covered an area as follows:

Sheet No.	FIELD NO. ECFP-Aa-53, 1953;	Spruce Creek north of Latitude 43° -06.00'
	FIELD NO. ECFP-Ab-53, 1953;	Salmon Falls River from bridge at Latitude 43°-11.43' to Latitude 43° -12.10'

MISCELLANEOUS

The shoreline in Spruce Creek is marshy, except for hard beach south of signal WOW and ledge in the vicinity of signals NET, BUD and GUY. A satisfactory junction was made at the southern end of sheet FIELD NO. ECFP-Aa-53 with the shoreline transferred from Shoreline Manuscript No. T-11139. The shoreline shown on the sheet, except in the areas mentioned above, is the outer edge of the tall marsh grass which is the mean high - water line.

The shoreline in the Salmon Falls River is entirely marshy. The shoreline shown on sheet FIELD NO. ECFP-Ab-53 is the outer edge of the tall marsh grass which is the mean high-water line.

These graphic control sheets, despite the fact that starting control was weak and there were insufficient checks, are considered complete and adequate for their required purpose.

The shoreline on H-8094 is from T-11139 as revised. REE 1-28-57

Respectfully Submitted,

Robert B. Noble

Robert B. Noble
ENS. USC&GS

NOTE BY CHIEF OF PARTY:

The purpose of these plane table surveys was to supply shoreline and signals for hydrography in areas for which no air photographs were available. Additional triangulation was not warranted to control these marginal areas in which there is no through navigation. It is understood that photographs have become available for the Spruce Creek area. It is probable that the positions of the hydrographic signals in the north end of Spruce Creek can be adjusted by photogrammetric methods to give a more nearly correct geographic position. However, the relative positions of the signals and the high water line as shown on the plane table sheets should be held as much as possible.

Positions of photo-hydro signals on H-8092 are from T-11144 (1952) The ~~relative~~ positions of rocks in Spruce Crk are in their proper relation to the shoreline shown on this graphic control survey.

J. A. Dinsmore
Nov. 1956

Approved and forwarded with added note,

Clarence R. Reed

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

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8092

Records accompanying survey:

Boat sheets 1; sounding vols. 10; wire drag vols. .....;

bomb vols. .....; graphic recorder rolls 13 env.

special reports, etc. 1-Smooth sheet, 1-Overlay.

.....

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

Number of positions on sheet		1828
Number of positions checked		172
Number of positions revised		4
Number of soundings revised (refers to depth only)		4
Number of soundings erroneously spaced		40
Number of signals erroneously plotted or transferred		—
Topographic details	Time	12
Junctions	Time	16
Verification of soundings from graphic record	Time	20

Applied revised tide corrections for 21 pos. a day (2 Sept. 1954 hydrog) — 1 hr

Verification by Chester R. Kupiec Total time 245 hrs Date 10-25-56

Reviewed by J. A. Dinsmore Time 48 Date 28 Nov 1956

M-2232-1

RHC

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~ 18 July 1955

Division of Charts: R. H. Carstens

Plane of reference approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 8092

Locality Piscataqua River, New Hampshire

Chief of Party: C. R. Reed in 1953-54
Plane of reference is mean low water, reading
2.6 ft. on tide staff at (1953) at Newington
4.3 ft. ~~below~~ on tide staff (1954) at Newington
13.8 ft. below B.M. 1 (1953)

4.6 ft. on tide staff at Atlantic Heights
31.1 ft. below B.M. 1 (1919)

2.5 ft. on tide staff at Fort Point (Fort Constitution)
12.5 ft. below B.M. 3 (1919)

1.9 ft. on tide staff at Jaffrey Point
20.0 ft. below B. M. 1 (1919)

~~Condition of records satisfactory except as noted below~~

Height of mean high water above plane of reference is as follows:

Newington	=	6.5 ft.
Atlantic Heights	=	7.5 ft.
Fort Point	=	8.6 ft.
Jaffrey Point	=	8.7 ft.

Note: Tide reducers for the positions listed below have been revised in red and verified:

E.C. McKay Tides Branch
Chief, Division of Tides and Currents.

Volume	Positions
10	1a-21a

U. S. GOVERNMENT PRINTING OFFICE 756675

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8092 FIELD NO. ECFP-1553

Maine - New Hampshire, Approaches to Portsmouth Harbor

Project No. CS-355

Surveyed - May 1953 - Sept. 1954 Scale 1:10,000

Soundings: Control:

808 Fathometer
Hand lead
Pole

Sextant fixes on shore signals

Chief of Party - C. R. Reed
Surveyed by - R. B. Noble and C. E. Horne
Protracted by - W. W. Feazel
Soundings plotted by - W. W. Feazel
Verified and inked by - C. F. Kupiec
Reviewed by - T. A. Dinsmore 28 November 1956
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline originates with the manuscripts of air-photographic surveys T-11143, T-11144, T-11146 (unreviewed) and T-11147 (reviewed) of 1952.

The origin of the signals is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in good agreement considering the irregularity in the bottom.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated. The low-water line was determined where practicable.

This survey covers five detached areas. Protruding ledge and offlying rocky shoals fringe much of the outer harbor and contribute to the irregularities in the bottom. Conspicuous shoals too numerous to specifically identify are apparent on the survey smooth sheet. The bottom for the most part is irregular. Depths along the axis of the natural channel of the Piscataqua River range from 28 to 68 ft.

4. Junctions with Contemporary Surveys

The present survey junctions adequately in five localities with H-8090 (1953-55) which falls within the area circumscribed by the detached areas on the present survey.

An adequate junction was also effected with H-7795 (1950) on the south at the entrance to Little Harbor.

The junctions with H-8094 (1953) on the northwest and H-8091 (1953) on the southeast will be considered in the reviews of those surveys. Other project surveys on the southeast have not yet been registered in this office.

5. Comparison with Prior Surveys

a. H-294 (1851) 1:20,000
H-2360 (1898) 1:10,000
H-2361 (1898) 1:20, 000
H-2656 (1903) 1:10,000
H-3032 (1909) 1:20,000
H-3524 (1913) 1:10,000

These prior surveys, taken together cover the area of the present survey. A comparison of the prior and present surveys reveals no appreciable changes in bottom. However, the old sounding lines which are widely spaced failed to reveal much critical information disclosed by the closer development on the present survey.

The following discrepancies are noted:

(1) The 1-ft. shoals charted in lat. 43°06.85', long. 70°48.52', from H-2656 should be disregarded. Intensive searching in both 1953 and 1954 at minus tides failed to reveal any rocks close to the surface. Local fisherman familiar with the area also state there are no 1-ft. depths in the above locality. It is, therefore, recommended that the present survey depths of 5 - 6 ft. supersede the charted depths.

(2) The ruins of the old railroad bridge originally charted in lat. 43°05.45', long. 70°45.65', from H-2656 no longer exists according to present survey information.

(3) The 22-ft. sounding charted in lat. 43°03.88', long. 70°40.55', originates with H-3032. Falling in 28-ft. depths on both the prior and present surveys, the prior sounding is probably 1 fm. in error. Present development is adequate to discredit the prior unsupported sounding which should be disregarded.

(4) The 46-ft. sounding charted in lat. 43°03.12', long. 70°40.40', from H-3032 originates with an unsupported sounding of 7 fms. 3 ft. A lead line call of 11 - 3 was probably misunderstood and erroneously recorded. Close development on the present survey is adequate to discredit the prior sounding which falls in depths of 70 ft, on both the prior and present surveys. The 46 should be disregarded.

Although the delineation of bottom features is more complete on the present survey, several prior soundings have been carried forward to supplement present depths. A few bottom characteristics were also retained from the prior surveys.

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

b. H-3975 W.D. (1917) 1:20,000 H-3976 W.D. (1917) 1:20,000

Present survey depths are in harmony with the effective wire-drag depths in the common area. Several soundings have been retained from the wire-drag surveys to supplement present survey coverage in the entrance area.

6. Comparison with Chart 229 (latest print date 1/26/53)
Chart 329 (latest print date 11/14/55)
Chart 1205 (latest print date 7/23/56)

A. Hydrography

Charted hydrography originates principally with the previously discussed surveys which need no further consideration. Partial application of the present survey has been made to the charts either from a copy of the boat sheet or from the unverified smooth sheet. Numerous revisions of 1 - 2 ft. have been made to smooth-sheet soundings during verification.

The following discrepancies are specifically noted:

(1) The rock awash charted in lat, 43°07.14', long. 70° 48.30', from an advance print of T-8531 (1943) should be disregarded. A thorough search of the locality when about 1 ft. of water covered the area revealed no indication of a rock. T-8531 does not now show the rock. A group of rocks, however, are shown slightly southeastward on the present survey. These should be charted.

(2) According to present survey information, the small piers or boathouses charted along the north bank of the Piscataqua River between long. 70°47' to 48' are no longer in existence.

(3) The 12-ft. sounding charted in lat. 43°03.93', long. 70°40.35', originates with a U. S. Engineer survey of 1842 (Lib. file No. 1029). Falling in depths of 30 - 32 ft. on both H-3032 (1909) and the present survey, the prior sounding is considered to be out of position and should actually fall on the shoal 80 meters northwestward.

(4) The 10-ft. sounding charted in lat. 43°03.48', long. 70°41.54', from the boat sheet of the present survey is erroneous and should be disregarded. The 11-ft. sounding now shown about 50 meters northward on the smooth sheet should be charted.

(5) The 37-ft. sounding charted in lat. 43°03.23', long. 70°42.25', from a source not readily ascertainable falls in depths of 41 - 42 ft. on the present survey. Several shoal spots of 35 - 37 ft. in the immediate vicinity on the present survey are considered adequate for charting purposes. The 37 may be disregarded.

(6) The island charted at the edge of the ledge in lat. 43°02.93', long. 70°43.00', from T-8532 (1943) does not exist and should be removed from the chart. No island was discerned from the low-water air photos used in delineating T-11147 (1952). The hydrographer on the present survey also states that the island charted does not exist.

(7) The hydrographer reports that the pier charted in lat. 43°05.19', long. 70°45.95', (Chart 229) is in ruins.

The present survey entirely supersedes the charted information.

B. Aids to Navigation

The aids to navigation located on the present survey are in substantial agreement with the charted aids and adequately mark the features intended.

7. Condition of Survey

a. The sounding records and Descriptive Report are complete and comprehensive. The Descriptive Report is exceptionally thorough in its recommendations regarding the charted information encircled for investigation on the preliminary reviews of Charts 229 and 329.

b. The smooth plotting was neat and accurate.

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

With the retention of several soundings from the prior surveys, the present survey is considered to be an excellent basic survey and no additional field work is required.

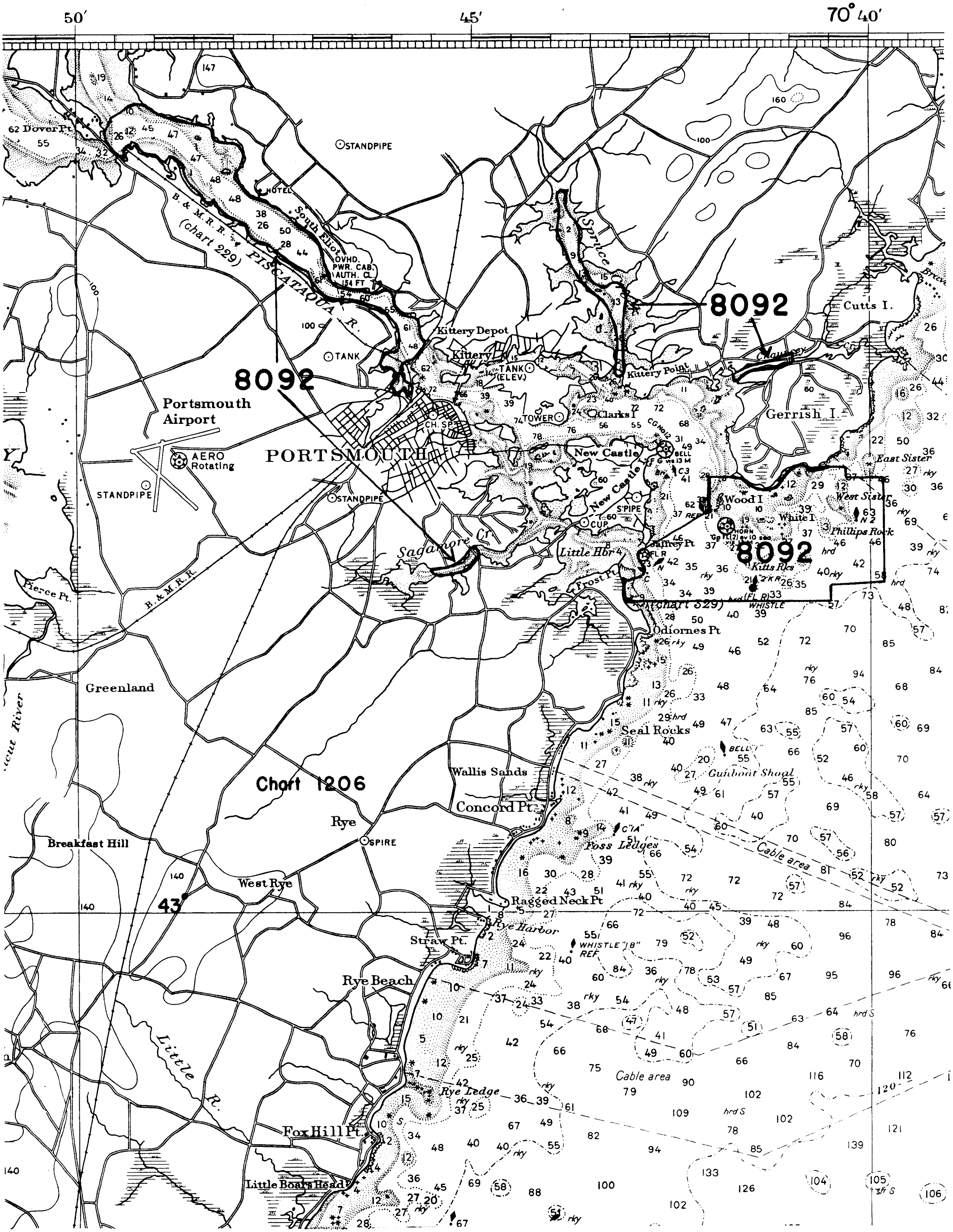
Examined and Approved:

Max G. Ricketts
Chief, Nautical Chart Branch

Charles A. Schanck
Chief, Division of Charts

Karl B. Jeffers
Chief, Hydrography Branch

Samuel B. Grenell
Chief, Division of Coastal Surveys


50′
45′
70° 40′
8092
8092
8092
Chart 1206
Dover Pt
STANDPIPE
HOTEL
South Eliot
OVHD. PWR. CAB. AUTH. CL. 154 FT
PISCATAQUA R.
B. & M. R. R.
(chart 229)
Kittery Depot
Kittery
TANK (ELEV.)
TANK
Spruce
Kittery Point
Chauncey Cr.
Cutts I.
Gerrish I.
Portsmouth Airport
AERO Rotating
STANDPIPE
PORTSMOUTH
CH. SP.
TOWER
Clarks I
New Castle
New Castle I.
BELL
S'PIPE
CUP
Wood I
White I
West Sister
East Sister
Phillips Rock
HORN
Jaffrey Pt
Kitts Rks
WHISTLE
Little Hbr
Frost Pt
Sagamore Cr.
(chart 329)
Pierce Pt.
B. & M. R. R.
Odiornes Pt
Greenland
Seal Rocks
Gunboat Shoal
Cable area
Wallis Sands
Concord Pt.
Rye
SPIRE
Foss Ledges
Breakfast Hill
West Rye
43°
Ragged Neck Pt
Rye Harbor
Straw Pt.
WHISTLE "IB" REF
Rye Beach
Cable area
Little R.
Rye Ledge
Fox Hill Pt.
Little Boars Head

NAUTICAL CHARTS BRANCH

SURVEY NO. 8092

Reviewed 28 Nov. 1956

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
6-27-55	329	R.K. DeLaunder	Partially applied Before ~~After~~ Verification and Review
4-11-56	1205	J.M. Albert	Partially via dwg 329 #10 Before ~~After~~ Verification and Review
6/13/57	229	ITEM - JJW	~~Before~~ After Verification and Review Partially
16 Aug 57	212	H. MacEwen	[redacted] After Verification and Review
16 Sept 57	211	H. MacEwen	[redacted] After Verification and Review
8-20-59	1205	R.K. DeLaunder	~~Before~~ After Verification and Review thru cht 211
3-17-60	1206	J.M. Albert	~~Before~~ After Verification and Review via cht 211
2-12-76	212	H. Radden	~~Before~~ After Verification and Review Re-positioned two lights and three piles only
			Before After Verification and Review
			Before After Verification and Review

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.