

11168

Diag. Cht. No. 1206.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Shoreline

Field No. Ph-1116 Office No. T-11168

LOCALITY

State New Hampshire - Maine

General locality

Locality Portsmouth Harbor

19452

CHIEF OF PARTY

L.J.Reed, Div. of Photo. Wash., D.C.

LIBRARY & ARCHIVES

DATE July 24, 1958

11168

DATA RECORD

T- 11168

Project No. (II): Ph-114

Quadrangle Name (IV): Portsmouth Harbor

Field Office (II):

Chief of Party:

Photogrammetric Office (III): Washington D.C.

Officer-in-Charge: Louis J. Reed, chief
Stereomap Section

Instructions dated (M) (III): 24 Feb 53

Copy filed in Division of
Photogrammetry (IV)Method of Compilation (III): Kelsh Plotter, ~~with pantograph~~ ^{out.}

Manuscript Scale (III): 1:5,000

Stereoscopic Plotting Instrument Scale (III): 1:4,000

Scale Factor (III): Photograph scale = 1:20,000
Photographic reduction = 1:4,000 to 1:5,000

Date received in Washington Office (IV): 3-13-53 Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): NA 1927

Vertical Datum (III):

Mean sea level except as follows:
Elevations shown as (25) refer to mean high water
Elevations shown as (5) refer to sounding datum
i.e., mean low water or mean lower low water

Reference Station (III):

Lat.:

Long.:

Adjusted
~~XXXXXXXX~~

Plane Coordinates (IV):

State:

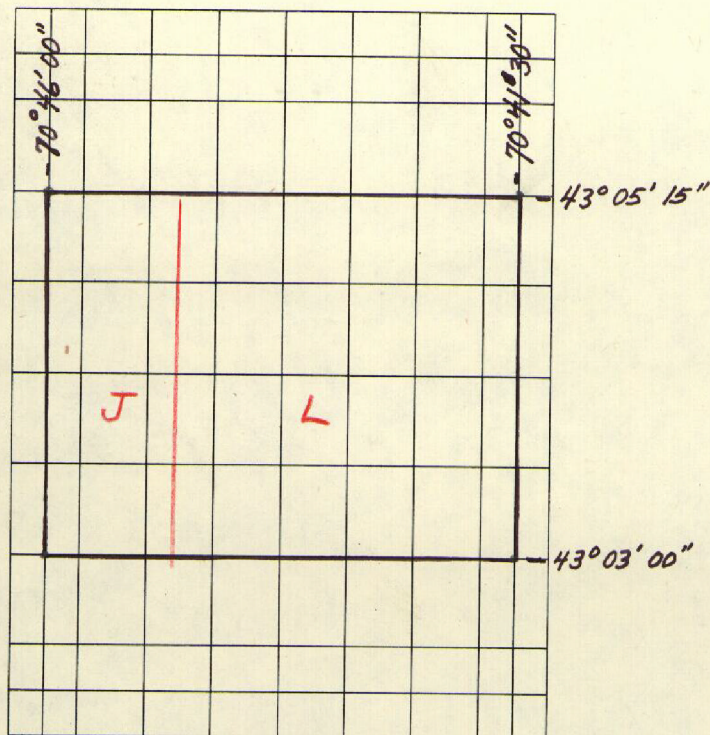
Zone:

Y=

X=

New Hampshire State Grid, 2000 foot interval
Maine-West State Grid, 2000 foot intervalRoman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office,
or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.



delineated
 Areas ~~contoured~~ by various personnel
 (Show name within area)
 (M) (III)

Area "L" compiled on the Kelsh Plotter model "A" by;
 Frank J. Lesslie

Area "J" compiled on the Kelsh Plotter model "B" by;
 Ivan R. Jarrett

DATA RECORD

Field Inspection by (II):

Date:

Planetable contouring by (II): none

Date:

Completion Surveys by (II):

Date:

Mean High Water Location (III) (State date and method of location):

The MHW line is shown as it was interpreted from the aerial photographs which were taken 2 July 1952.

Projection and Grids ruled by (IV):

Jack Allen on the Reading Ruling Machine

Date:

3 Mar 53

Projection and Grids checked by (IV):

Howard D. Wolfe

Date:

4 Mar 53

Control plotted by (III):

Louis Levin

Date:

12 Mar 53

Control checked by (III):

Louis J. Reed

Date:

13 Mar 53

~~XXXXXXXX~~ Stereoscopic

Control extension by (III):

Ivan R. Jarrett and
Frank J. Lesslie

Date:

16 Mar 53

delineation
Stereoscopic Instrument ~~XXXXXXXX~~ (III):

Planimetry
Ivan R. Jarrett and
Frank J. Lesslie
Contours

Date:

16 Mar 53

Date:

compiled
Manuscript ~~XXXXXXXX~~ by (III):

John B. McDonald

Date:

20 Mar 53

Photogrammetric Office Review by (III):

William D. Harris

Date:

20 Mar 53

Elevations on Manuscript
checked by (II) (III):

William D. Harris

Date:

20 Mar 53

Camera (kind or source) (III): $8\frac{1}{4}$ " normal-angle single lens, Dept. of Agriculture

Number	Date	Time	Scale	Stage of Tide
DQW-10K numbers 12, 13, 14 22, 23, 24	2 Jul 52	11:15	1:20,000	6.0' below MHW at Portsmouth 7.0' below MHW at Jaffrey Point 2.0' above MLW

Tide (III)

Reference Station: Portland, Maine
Subordinate Station: Jaffrey Point
Subordinate Station: Portsmouth

Ratio of Ranges	Mean Range	Spring Range
1.0	8.7	10.0
0.9	7.8	9.0

Washington Office Review by (IV):

Date:

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): Inapplicable

✓ Shoreline (More than 200 meters to opposite shore) (III): 38 miles

✓ Shoreline (Less than 200 meters to opposite shore) (III): none

Control Leveling - Miles (II): Inapplicable

Number of Triangulation Stations searched for (II): none Recovered:

Identified:

Number of BMs searched for (II): none Recovered:

Identified:

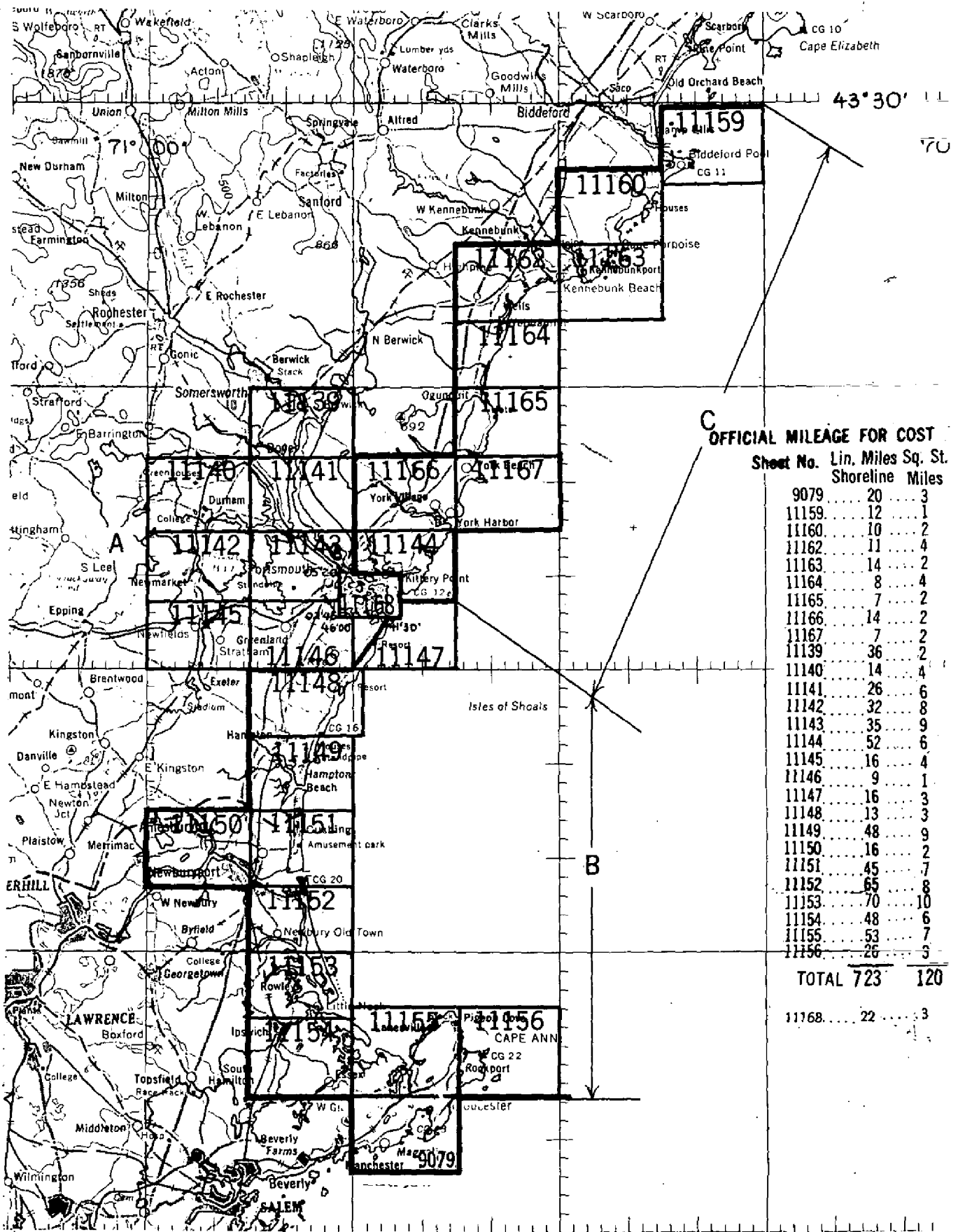
Number of Recoverable Photo Stations established (III): none

✓ Number of Temporary Photo Hydro Stations established (III): 76

Remarks:

SHORELINE MAPPING PROJECT PH-114

BIDDEFORD POOL, MAINE TO CAPE ANN, MASS.



OFFICIAL MILEAGE FOR COST

Sheet No. Lin. Miles Sq. St. Shoreline Miles

9079	20	3
11159	12	1
11160	10	2
11162	11	4
11163	14	2
11164	8	4
11165	7	2
11166	14	2
11167	7	2
11139	36	2
11140	14	4
11141	26	6
11142	32	8
11143	35	9
11144	52	6
11145	16	4
11146	9	1
11147	16	3
11148	13	3
11149	48	9
11150	16	2
11151	45	7
11152	65	8
11153	70	10
11154	48	6
11155	53	7
11156	26	3

TOTAL 723 120

11168. 22 3

1. Preface:

FIELD INSPECTION REPORT

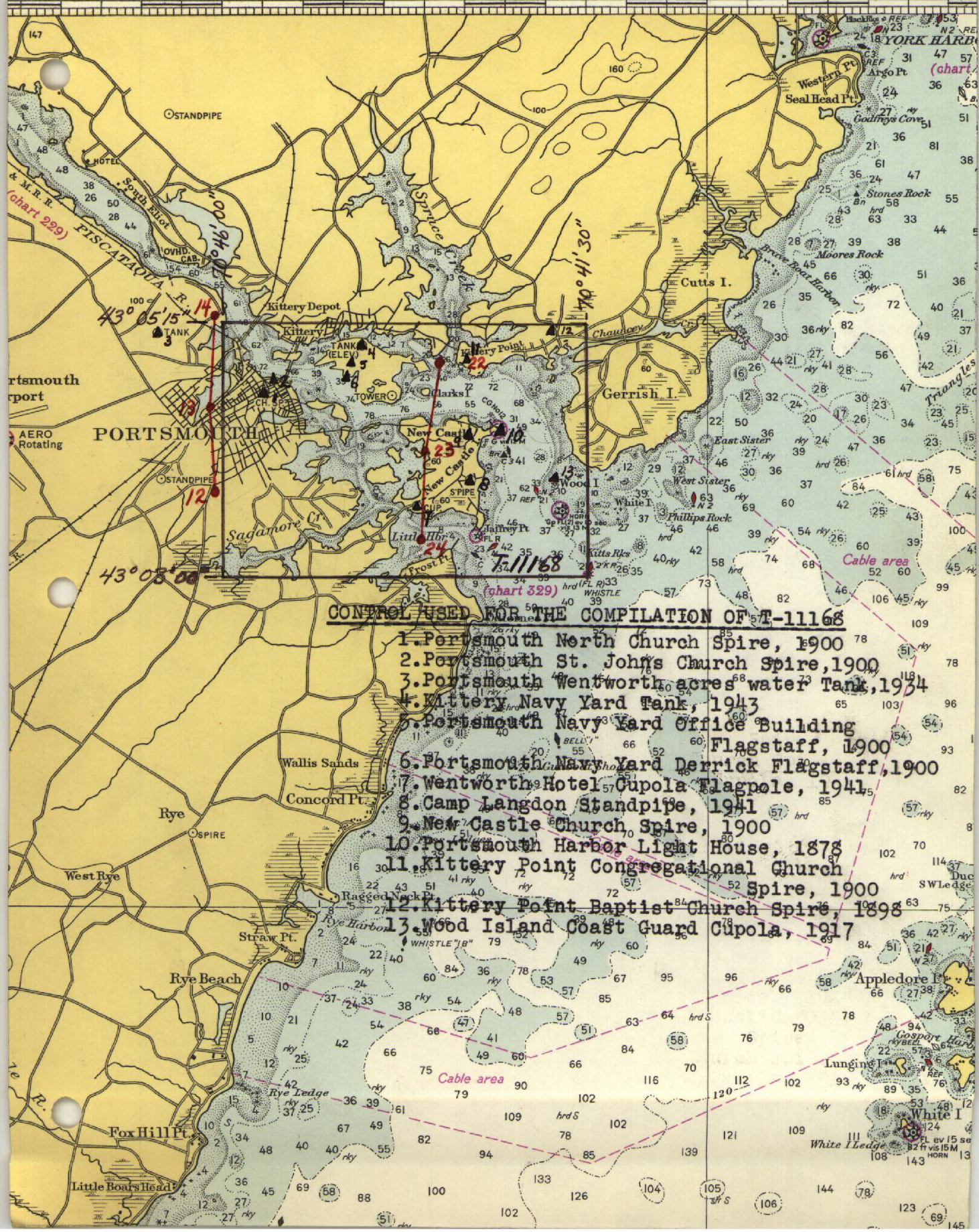
- 1-20. There was no current Field Inspection of the shoreline for the compilation of T-11168. However there was Field Inspection of the area in 1943 on 1:20,000 scale photographs which was made for a 1:20,000 scale topographic mapping project.

RADIAL PLOT REPORT

- 21-30. There was no radial plot or stereo-bridging required for the compilation of T-11168. Each stereoscopic model was adequately controlled by triangulated landmarks and pass points from adjacent models.

45'

40'



CONTROL USED FOR THE COMPILATION OF T-11168

1. Portsmouth North Church Spire, 1900
2. Portsmouth St. John's Church Spire, 1900
3. Portsmouth Wentworth acres water Tank, 1934
4. Kittery Navy Yard Tank, 1943
5. Portsmouth Navy Yard Office Building Flagstaff, 1900
6. Portsmouth Navy Yard Derrick Flagstaff, 1900
7. Wentworth Hotel Cupola Flagpole, 1941
8. Camp Langdon Standpipe, 1941
9. New Castle Church Spire, 1900
10. Portsmouth Harbor Light House, 1878
11. Kittery Point Congregational Church Spire, 1900
12. Kittery Point Baptist Church Spire, 1898
13. Wood Island Coast Guard Cupola, 1917

MAP T-11163 PROJECT NO. PH-114 SCALE OF MAP 1:5,000 SCALE FACTOR

STATION	N.H. State Plane Coords. SOURCE OF INFORMATION (INDEX) page no.	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS FORWARD (BACK)	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)
FROST POINT, 144 1941 dm	50	N.A. 1927	201,984.90 751,868.96			
FROST POINT, 144 1941 (sub pt)		"	201,817.24 751,849.14			
PORTSMOUTH HARBOR, NORTH-WEST BASE, 1842 dm	11	"	201,379.19 752,893.89			
KITTERY POINT CONG. CHURCH, SPIRE (Me)	12	"	213,395. 754,031.			
1900 (no check) d PARKFIELD HOTEL CUPOLA, 1900	12	"	213,855. 756,961.			
(no check) d PORTSMOUTH NAVY YD PRISON, TALL BLACK	14	"	211,377.90 749,850.14			
CHIMNEY 1908 d PORTSMOUTH NAVY YD OFFICE BLDG, FLAG-	18	"	213,240. 747,697.			
STAFF, 1900 nd PORTSMOUTH NAVY YD DERRICK, FLAGSTAFF,	18	"	212,473. 747,297.			
1900 nd WHALEBACK LIGHT- HOUSE, 1878 d	24	"	205,103.14 759,210.92			
WOOD ISLAND COAST GUARD, CUPOLA, 1917 d	25	"	206,950.31 758,841.51			
KITTERY NAVY YARD TANK, 1943 d	51	"	214,335.174 748,078.214			

1 FT. = 3048006 METER

COMPUTED BY: *SWT*

DATE 25 Feb. 1953

CHECKED BY:

DATE

M. 2388-12

Page 9

MAP T. 11168 PROJECT NO. PH-114 SCALE OF MAP 1:5,000 SCALE FACTOR

STATION	N.H. State Plane Coords. Information (INDEX) Page No.	N.A. 1927 DATUM	EASTING OR U-COORDINATE LONGITUDE OR X-COORDINATE	DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS		N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
				FORWARD	(BACK)	FORWARD	(BACK)	
KITTERY POINT BAPTIST CHURCH SPIRE (Mc) 12	12	N.A. 1927	214,953.58 758,559.92					
PORTSMOUTH ELEC. LT. & PWR. WORKS WATER TANK, TOP, 1900 d.	19	"	213,850. 741,817.					
PORTSMOUTH, ST JOHNS CHURCH SPIRE, 18	18	"	212,131. 743,300.					
PORTSMOUTH CATHOLIC CHURCH SPIRE, 18	18	"	210,041.47 741,181.07					
PORTSMOUTH NORTH CHURCH SPIRE, 12	12	"	211,466.18 742,699.15					
NEW CASTLE CHURCH SPIRE, 1900 d	12	"	209,584. 753,797.					
PORTSMOUTH HARBOR LIGHTHOUSE, 1878 d	25	"	209,551.00 755,866.31					
CAMP LANGDON FLAGPOLE, 1941 d	50	"	207,171.43 754,390.02					
CAMP LANGDON STANDPIPE, 1941 d	50	"	206,981.10 754,115.40					
WENTWORTH HOTEL CUPOLA, FLAG 1941 d	25	"	205,612.42 751,598.28					
WENTWORTH HOUSE CUPOLA, 1878 Mc	9	"	205,356. 751,298.					
FROST POINT, 2 dm. 1898	11	"	202,926.10 753,122.93					

1 FT. = 3048006 METER

COMPUTED BY:

DATE

CHECKED BY:

DATE

M-2368-12

Page 10

COMPILATION REPORT31. Delineation:

This manuscript was delineated with the Kelsh Plotters models "A" and "B" as shown on the diagram on page 2 of this report.

The entire shoreline of the area covered by this manuscript was mapped with the exception of the west shore of Gerrish Island and the shoreline of Sagamore Creek above the bridge.

32. Control:

There were enough triangulated landmarks imaged on the photographs to control the individual models so that no field identification was required. The horizontal control which was used and held to is indexed on the Control Sketch on page 8.

35. Shoreline and Alongshore Details:

The Field Inspection for the topographic mapping project of 1943 included shoreline inspection which was used for this compilation. The field work was done on 1:20,000 scale photographs. The Plotter operator observed the model at 1:4,000 scale and was therefore able to plot all of the features which were pointed out by the field inspector and many more.

The high-water line was located directly in the plotter model where it was visible and according to the 1943 field inspection on sloping white beaches where it did not show in the model. The approximate low-water line and the limits of shoal areas was interpreted by the plotter operator.

38. Control for Future Surveys:

There were no topographic stations established by this survey and therefore no 524 cards prepared. There were 76 photo-hydro points identified and located by the plotter operator for the control of future hydrographic surveys. These points were identified by a number on a set of 1:5,000 scale photographs, the map manuscript, and in Notes for The Hydrographer. (side-heading 49)

40. Horizontal Accuracy:

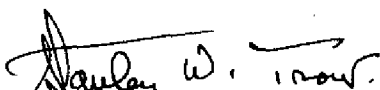
This 1:5,000 scale manuscript meets the requirements of the National Standards of Map Accuracy. 9

41. & 42. See page 13.

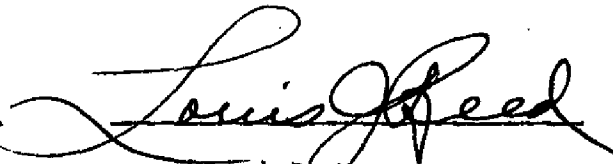
49. Notes for the Hydrographer: (see unnumbered pages at the end of this report)

Submitted by

Approved by



Stanley W. Trow, chief,
Single-lens Plotting Unit



Louis J. Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer

PHOTOGRAMMETRIC OFFICE REVIEW

T-11168

1. Projection and grids ☒ 2. Title ☒ 3. Manuscript numbers ☒ 4. Manuscript size ☒

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy ☒ 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) ☒ 7. Photo hydro stations ☒ 8. Bench marks ☒ 9. Plotting of sextant fixes ☒ 10. Photogrammetric plot report ☒ 11. Detail points ☒

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline ☒ 13. Low-water line ☒ 14. Rocks, shoals, etc. ☒ 15. Bridges ☒ 16. Aids to navigation ☒ 17. Landmarks ☒ 18. Other alongshore physical features ☒ 19. Other along-shore cultural features ☒

N = None or Not applicable

PHYSICAL FEATURES

20. Water features ☒ 21. Natural ground cover ☒ 22. Planetable contours ☒ 23. Stereoscopic instrument contours ☒ 24. Contours in general ☒ 25. Spot elevations ☒ 26. Other physical features ☒

CULTURAL FEATURES

27. Roads ☒ 28. Buildings ☒ 29. Railroads ☒ 30. Other cultural features ☒

BOUNDARIES

31. Boundary lines ☒ 32. Public land lines ☒

MISCELLANEOUS

33. Geographic names ☒ 34. Junctions ☒ 35. Legibility of the manuscript ☒ 36. Discrepancy overlay ☒ 37. Descriptive Report ☒ 38. Field inspection photographs ☒ 39. Forms ☒

40. William D Harris
Reviewer

Louis J. Reed
Supervisor, Review Section or Unit
Louis J. Reed, Chief
Stereoscopic Mapping Section
Photogrammetric Engineer

41. Remarks (see attached sheet)

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

Compiler

Supervisor

43. Remarks:

M-2623-12

NOTES TO THE HYDROGRAPHER (continued)

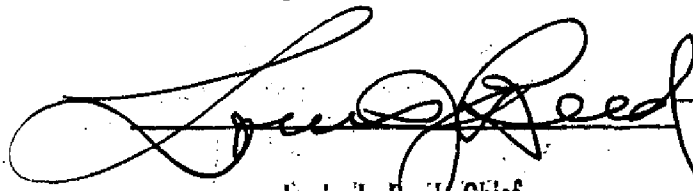
<u>Station number</u>	<u>Station description</u>
100	SE corner of So. bridge tower
101	SE corner of No. bridge tower
102	SE corner of crib
103	SE corner of pier
104	Center of bridge pier
105	NW corner of pier
106	NE corner of foundation
107	Corner of bulkhead
108	SE corner of bulkhead
109	SE corner of pier
110	SE corner of pier
111	NW corner of bulkhead
112	Flagpole
113	Bush on point
114	East gable of building
115	Center of tree
116	Center of bush or rock
117	Center of bush
118	West end of south abutment
119	Point of grass
120	NE end of NW abutment
121	SW corner of pier

41. Supplemental Operation No.1: (12 June 53)

Field identification of two triangulation stations by the substitute station method (FALSE, 1900 and HIGBEE, 1941) were received to serve as ~~fix~~ control for a Kelsh model covering the west shore of Gerrish Island, Maine. The model was compiled with the shoreline junctioning very well with that previously compiled when only office identified control was available. After this operation the base compilation sheet is to be forwarded to the field for hydrographic operations, during which time the shoreline detail will be verified.

42. Supplemental Compilation Operation No. 2: (13 November 53)

Work consisted of plotting on the base compilation three triangulation and one topo stations from field positions established during the hydrographic survey. No changes in shoreline detail were indicated by the hydrographic survey and therefore none were made to the base sheet. However, field operations did discover that something was wrong with ~~the plotting of~~ Δ WENTWORTH HOUSE CUPOLA, 1878, and this agrees with conditions found regarding this same station during compilation; it could not be held in the Kelsh model -- it fell in the street when the model was holding to five other control stations in the model. The base sheet is now to be sent to the Tampa Office for incorporation of the detail of the sheet into smaller scale quadrangles of this project.



Louis J. Reed, Chief
Stereoscopic Mapping Branch
Photogrammetric Engineer

FOR REVIEW REPORT SEE DESCRIPTIVE REPORT T-11144

REVIEW REPORT T-11144 & T-11168
SHORELINE MANUSCRIPT
9 December 1954

61. GENERAL

Manuscript T-11168 is a 1:5000 scale map especially prepared for use by the hydrographer. It contains only photo-hydro points and shoreline with offshore details.

It covers a portion of the same area as T-11144, a shoreline manuscript of 1:10,000 scale.

Common detail between the two manuscripts is in complete agreement.

62. COMPARISON WITH REGISTERED SURVEYS

T-1050 & a 1:10,000 1867, 1912
T-2375 & a 1:10,000 1898-99-1901, 1912

T-11144 supersedes the older surveys for charting the shoreline, adjacent culture, and planimetry.

63. COMPARISON WITH MAPS OF OTHER AGENCIES

USE Kittery, Me., N. H. 1:25,000 1949

T-11144 supersedes the quadrangle for charting because of more detailed shoreline and more recent cultural data.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

H-8092 1:10,000 1953 (Boat Sheet ECFP 1553)

Only a print of the boat sheet was available during review. In the area of T-11144 hydrography was accomplished only at the southern tip of Gerrish Island, in Chauncey Creek, and in Spruce Creek. The shoreline in all these areas was from a preliminary compilation and it has been altered during the final compilation of T-11144 to agree with field inspection (Gerrish Island-Chauncey Creek) and from extra photographic coverage in the Spruce Creek area. No hydrography was done in the Portsmouth Harbor-Piscataqua.

The shoreline of Wood Island on T-11144 has been changed to agree with T-11168.

65. Comparison with Nautical Charts:

329 1:10,000 ed. June, 1954 Portsmouth Harbor

T-11144 supersedes the chart for shoreline and culture in their common areas. No field inspection and no hydrography was done in the Portsmouth Harbor-Piscataqua River area so that only self-evident off-shore features are delineated on T-11144. It is of necessity incomplete in this respect.

No cable areas appear on T-11144 because of this absence of field inspection.

Marine railways charted at the entrance to Spruce Creek are not in evidence on the 1953 photographs, though the one at Wood Island is still visible.

66. Bridges:

Only the two bridges over Chauncey Creek were measured during field inspection by the photogrammetric party. Clearances for three other bridges were added during review from data in Chart Letter No. 58, 1954.

67. Accuracy:

The horizontal control in the north portion of Spruce Creek was not all that was to be desired. However, it is believed that the map meets the National Standards of Accuracy.

The hydrographic stations established by the hydrographic party by planetable methods could not be held by the radial cuts and they were delineated on the manuscript in their radial positions rather than the planetable positions. See Plane Table Report for Project CS 355, Sheet ECFP-Aa-53.

However, because Spruce Creek is not a navigable stream the shoreline and planimetry are acceptable for interior charting.

Reviewed by:

Lena T. Stevens
Lena T. Stevens

APPROVED:

L. C. Landy

Chief, Review Section
Div. of Photogrammetry

Max H. Kelt

Chief, Nautical Chart Branch
Div. of Charts

for J. B. [unclear]

Chief, Div. of Photogrammetry
1911

[Signature]

Chief, Div. of Coastal Surveys