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Diag. Cht. No. 1205.

Form 504

## U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey ShorelineField No. Ph-114 Office No. T-11573 and T-11574.

## LOCALITY

State MaineGeneral locality SacoLocality Saco River1954

## CHIEF OF PARTY

E.H.Kirsch, Balto. Photo. Office

## LIBRARY &amp; ARCHIVES

DATE June 10, 1958

# DATA RECORD

T-11573 and T-11574

Project No. (II): **Ph-114**

Quadrangle Name (IV):

Field Office (II): **York, Maine**

Chief of Party: **E. H. Kirsch**

Photogrammetric Office (III): **Baltimore, Md.**

Officer-in-Charge: **E. H. Kirsch**

Instructions dated (II) (III): **20 Feb. 1953**

Copy filed in Division of  
Photogrammetry (IV)

**13 Mar. 1953**

**29 Jan. 1954**

**Supplement 3**

**6 May 1953**

**Supplement 7**

**5 Aug. 1954**

**Supplement 6**

**3 June 1954**

**Supplement 8**

**1 Feb. 1955**

Method of Compilation (III): **Air Photographic (Kelsh Plotter)**

Manuscript Scale (III): **1:5000**

Stereoscopic Plotting Instrument Scale (III): **1:4000**

Scale Factor (III): **1.000**

Date received in Washington Office (IV):

**APR 11 1955**

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV): **5-8-58**

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): **FLETCHERS NECK 156, 1941**

Lat.: **43° 26' 55.921"**

Long.: **70° 20' 30.066"**

Adjusted  
~~Uncorrected~~

Plane Coordinates (IV):

State:

Zone:

Y=

X=

Roman 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.


Inapplicable

Areas contoured by various personnel  
 (Show name within area)  
 (II) (III)

# DATA RECORD

Field Inspection by (II): **George E. Varnadoe**  
**Photo. Engr.**

Date: **July 1954**

Planetable contouring by (II): **Inapplicable**

Date:

Completion Surveys by (II):

Date:

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

**Photogrammetric (Kelsh Plotter) 29 April 1954**

Projection and Grids ruled by (IV): **A. R.**

Date: **10 Feb. 1955**

Projection and Grids checked by (IV): **H. D. Wolfe**

Date: **11 Feb. 1955**

Control plotted by (III): **J. C. Richter**

Date: **17 Feb. 1955**

Control checked by (III): **A. K. Heywood**

Date: **17 Feb. 1955**

Radial Plot or Stereoscopic **J. C. Richter**  
 Control extension by (III):

Date: **17 Feb. 1955**

Planimetry **J. C. Richter**  
 Stereoscopic Instrument compilation (III):  
 Contours ---

Date: **21 Feb. 1955**

Date: ----

Manuscript delineated by (III): **J. C. Richter**

Date: **18 Mar. 1955**

Photogrammetric Office Review by (III): **A. K. Heywood**

Date: **1 April 1955**

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

Date:

Camera (kind or source) (III): U.S.C. & G. S. Type W (6" focal length)

Number	Date	PHOTOGRAPHS (III)		Scale	Stage of Tide		
		Time (EST)					
54-W-1350	4/29/54	15:18		1:20,000	1.9'	above	MLW
1351	"	15:18		"	"	"	"
1352	"	15:19		"	"	"	"
1353	"	15:19		"	"	"	"
1354	"	15:20		"	"	"	"

Tide (III)  
(From Predicted tables)

Reference Station: Portland, Maine  
Subordinate Station: Wood I. Harbor  
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
-	8.9	10.2
1.0	8.7	9.9

Washington Office Review by (IV): *L. F. Stevens*

Date: Feb. 28, 1957

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

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

Shoreline (More than 200 meters to opposite shore) (III): 16

Shoreline (Less than 200 meters to opposite shore) (III):

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II): 10

Recovered: 8

Identified: 8

Number of BMs searched for (II):

Recovered:

Identified:

Number of Recoverable Photo Stations established (III):

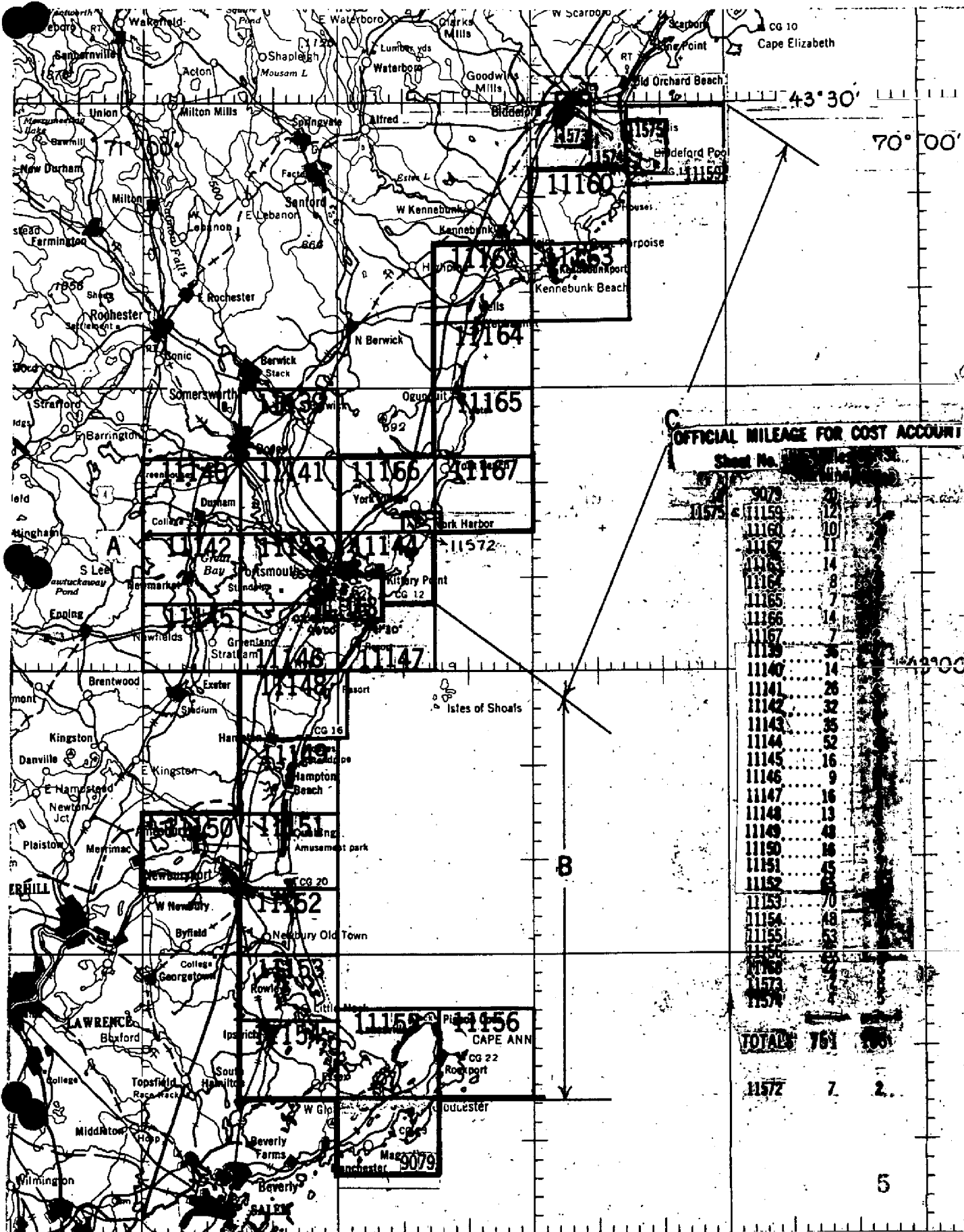
Number of Temporary Photo Hydro Stations established (III): 32

Remarks:

# SHORELINE MAPPING PROJECT PH-114

## BIDDEFORD POOL, MAINE TO CAPE ANN, MASS.

-5-



### OFFICIAL MILEAGE FOR COST ACCOUNT

Sheet No. 11159

Sheet No.	Mileage
11159	20
11160	10
11161	11
11162	14
11163	8
11164	7
11165	14
11166	7
11167	14
11168	32
11169	20
11170	32
11171	35
11172	52
11173	16
11174	9
11175	16
11176	13
11177	48
11178	16
11179	45
11180	6
11181	70
11182	48
11183	53
11184	22
11185	22
11186	22
11187	22
11188	22
11189	22
11190	22
11191	22
11192	22
11193	22
11194	22
11195	22
11196	22
11197	22
11198	22
11199	22

TOTAL 761

1157 7 2

Summary to Accompany T-11573, T-11574

Field instructions were issued for Ph-114 to provide shoreline and control for inshore hydrographic surveys and to provide standard shoreline manuscripts for chart compilation.

The hydrographic phase of survey was accomplished under instructions for CS-355, 6 March 1953, 29 January 1954, and 16 February 1955, Gloucester Harbor, Mass. to Biddeford, Saco River, Maine.

*Croner film positive*  
A ~~cloth-backed lithographic print~~ of each map at manuscript scale and the descriptive report will be registered and permanently filed in the Bureau Archives.

Field Inspection Report  
Project Ph-114  
Sheet ~~11411/11~~ T-11573 & 11574

2. Areal field inspection.

Near its northern limit this shoreline survey includes a part of the towns of Biddeford and Saco, Maine. The shoreline here is highly developed with dams, factories and plants. Southeast and down the river the shoreline consists of tree covered bluffs interspersed with mud flats which continue to the mouth of the river where sand beaches are found.

The Photography is excellent. It is believed that the field inspection is complete and adequate.

3. Horizontal control.

Three U S C & G S intersection stations (natural objects) near the northern limit of the sheet and five U S G S temporary stations (road intersections) along the southwest shore of the river, were identified on the photographs.

The temporary stations are listed as Transit Traverse stations and the order of accuracy is not shown.

One U S C & G S intersection station "Johnsons House, East Chimney, 1868" was reported destroyed in 1943 and was not identified.

4. Vertical Control.

Inapplicable

5. Contours and Drainage.

Inapplicable

6. Woodland cover.

Representative areas have been classified.

7. Shoreline and alongshore features.

The photographs were made at near mean low water therefore all these features are discernible on the photographs and have been labeled.

The shoreline was inspected at mean high water and at mean low water. Where these lines are not obvious on the photographs, as along the sand beaches, measurements were made to them from topographic features. Both lines were delineated in their entirety along questionable areas.

The foreshore, bluffs, piers etc. have been classified and labeled.

One submarine cable exists near the northern limit of the sheet. The ends have been identified and labeled.

#### 8. Offshore features.

A tide curve was constructed from predicted tides and the low water line and offshore features were inspected at or very near mean low water, therefore the accuracy with which these were located is very good.

#### 9. Landmarks and aids.

One fixed aid to navigation exists. It was identified directly on the photographs and reported on form 567.

#### 10. Boundaries, monuments and lines.

Inapplicable

#### 11. Other control.

One topographic station established in 1943 was recovered and identified on the photographs.

Thirty two photo-hydro stations were established, all of which are semi-permanent in nature.

#### 12. Other interior features.

Roads, buildings and other cultural features within the limits of the survey have been classified.

The ends of an overhead power line which is located near the northern limit of the sheet have been located and identified. The vertical clearance of which was furnished by the Central Maine Power Co.

All bridges are beyond the limits of navigation.

13 Geographic Names.

No discrepancies were noted during this inspection.

14. Special reports and supplemental data.

None

Submitted by,

*George E. Varnadoe*  
George E. Varnadoe  
Photo. Engr.  
29 July 1954

PHOTOGRAMMETRIC PLOT REPORT  
Project Ph-114

21. AREA COVERED

T-11573, T-11574 and T-11575.

22. METHOD

Models were set and compiled without benefit of the usual photo plot or bridge. The Kelsh Plotter was used holding to the horizontal control points in each model. Pass points common to adjoining models were dropped and also held when these models were set. Only the 1954 photography, 54-W-1350 thru 1356, was used. Models 1350-51 and 1353 - 54, having the most control, were set before those adjoining. Photographs 53-J-345 thru 352 were those used in the radial plot for the previous compilation of T-11159.

Work sheets of a scale of 1:4,000 were used for the Kelsh compilation. These were reduced on film positive to a scale of 1:5,000 for transfer to the map manuscripts.

This office had planned at first to run a bridge or plot for this strip but since the Washington office felt that there was sufficient control, they advised compiling each model as it was set. This appears to have worked out well. Pass points between models could be held to well within 0.5 mm.

23. ADEQUACY OF CONTROL

Horizontal control requirements to the field are not available. Nevertheless, horizontal control was adequate.

TEMP. STA. NO. 2370+(USGS), 1940 and TEMP. STA. 2365+(USGS), 1940 (not held) were off 0.8 mm. and 2.0 mm, respectively, east of their plotted geographic positions. It was not possible to hold either of these points and tie with the adjoining models.

In addition to identified control, these stations were identified in the office from published descriptions. Two of these appeared to hold and one did not. The plotted geographic position of BIDDEFORD ORTHODOX CH. SPIRE, 1850 was held on the front gable of the church, but not where the present spire appears to be. Refer to sketch of control, attached.

24. SUPPLEMENTAL DATA

None.

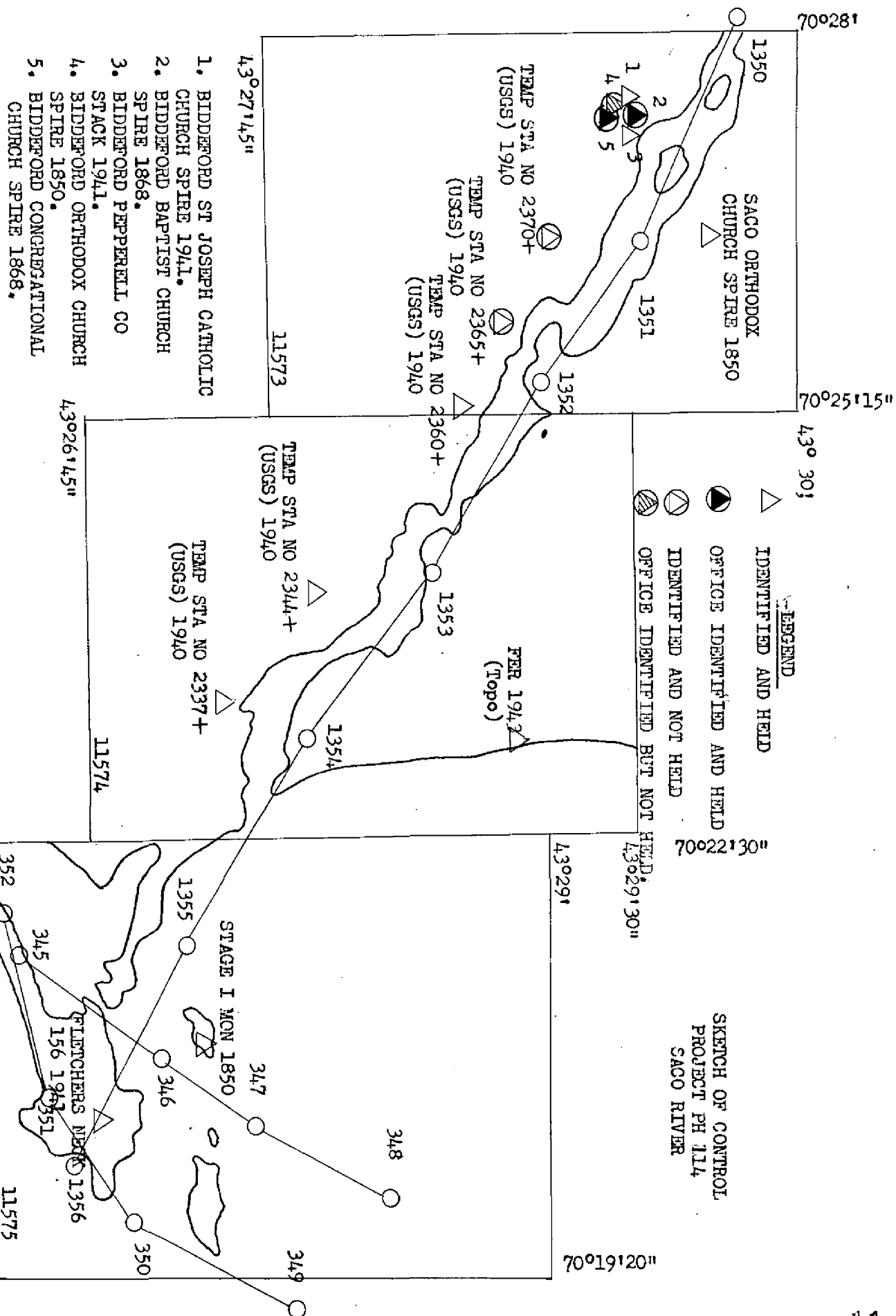
25. PHOTOGRAPHY

Photography and diapositives were of excellent quality. Coverage for the east tip of Wood I. and Fletcher's Neck was monoscopic, otherwise coverage and overlap were adequate.

Respectfully submitted  
25 March 1955

A handwritten signature in dark ink, appearing to read "Henry P. Eichert", written in a cursive style.

Henry P. Eichert  
Super. Carto.





MAP T-11574

PROJECT NO..... Ph-114.

SCALE OF MAP...1:5000.

SCALE FACTOR.....1.000

[illegible]

1 FT. = 3048006 METERS

COMPUTED BY: H. P. Eichert

DATE 20 January 1955

CHECKED BY: J. C. Richter

DATE:

COMM-DC-5784

COMPILATION REPORT  
Project Ph-114  
T-11573 & 11574

31. DELINEATION

All detail including shoreline was delineated by the Kelsh instrument. Delineating shoreline directly from the Kelsh model proved successful except in areas of poor contrast i.e., areas with no well defined line to follow such as mud in front of and back of the MHWL, apparent shoreline etc. The model scale was 1:4000 which aided in the operator's ability to see small differences in contrast. At a much smaller scale it is doubtful that this would be apparent.

32. CONTROL

Refer to Photogrammetric Plot Report, paragraph No. 23.

33. SUPPLEMENTAL DATA

None.

34. CONTOURS AND DRAINAGE

Contours are inapplicable and drainage is complete.

35. SHORELINE AND ALONGSHORE DETAILS

Shoreline inspection was complete and well done.

A low water line was furnished by the field inspector.

36. OFFSHORE DETAILS

Data complete.

37. LANDMARKS AND AIDS

Data complete.

38. CONTROL FOR FUTURE SURVEYS

No topographic stations were established during this survey.

A list of recoverable photo-hydro stations complete with descriptions has been prepared and included in paragraph No. 49.

39. JUNCTIONS

Junction was made to the east with Survey T-11575. There were no other contemporary surveys.

40. HORIZONTAL AND VERTICAL ACCURACY

Refer to Photogrammetric Plot Report, item No. 23.

46. COMPARISON WITH EXISTING MAPS

USGS quadrangle Biddeford, Me., scale 1:62,500, published 1941.

47. COMPARISON WITH NAUTICAL CHARTS

Chart 231, First Edition 1925, scale 1:20,000, 4th Edition, Oct. 1945, 7/26/54.

Items to be applied to Nautical Charts immediately: None.

Items to be carried forward: None.

Approved and forwarded

*E. H. Kirson*

E. H. Kirson, COMDR USC&GS  
Officer in Charge  
Balto. Photo. Office

Respectfully submitted  
5 April 1955

*A. K. Heywood*

A. K. Heywood  
Carto. (Photo.)

## PHOTOGRAMMETRIC OFFICE REVIEW

T. 11573-74

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 ☒

## 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. *[Signature]*

Reviewer

*[Signature]*

Supervisor, Review Section or Unit

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

Review Report T-11573-74  
Shoreline Maps  
28 February 1957

62. Comparison with Registered Surveys

T-1188	1:10,000	1870	Mouth of Saco River and
T-1188a	"	1912-13	Biddeford Pool
T-1225	"	1871	Towns of Biddeford
T-1225a	"	1912	and Saco

Because of extensive cultured changes T-11573-74 supersede the older surveys for charting purposes.

63. Comparison with Maps of Other Agencies

USE Biddeford 1:25,000 1949

The present surveys supersede the quadrangle for charting shoreline and near-shore features.

64. Comparison with Contemporary Hydrographic Surveys

Hydrography up the Saco River to Biddeford was accomplished in 1955 but no prints or boat sheets were available for comparison. The surveys are being processed at the Norfolk Office *HP 257, 1:5000 HP 258 1:5000 have been received and compared. No important differences exist.*

Some shoreline changes were made during review from field inspection photograph information.

65. Comparison with Nautical Charts

231 1:20,000 Oct. 1945 Corr. July 1954

No marked difference in shoreline exists between the chart and the survey. These surveys have not been applied to charts.

66. Accuracy

These maps comply with project instructions and meet the National Standards of Accuracy.

Reviewed by:

*K. M. Maher*  
for Lena T. Stevens

APPROVED BY:

*L. C. Lande*  
Chief, Review & Drafting Sec.  
Photogrammetry Division

*Art. Bull*  
Chief, Photogrammetry Division

*Max Skidmore*  
Chief, Nautical Chart Branch  
Charts Division

*J. Bowie*  
Chief, Coastal Surveys

48. GEOGRAPHIC NAMES

T-11573

Biddeford  
Boston & Maine RR

Cow Island

Factory Island

Gordon Point

Maine 9 & 208  
Mouse Island

Saco  
Saco River

U.S. 1

T-11574

Bayview

Camp Ellis  
Chandler Point  
Chase Point

Ferry Beach

Maine 9  
Maine 9 & 208

Saco Bay  
Saco River  
St Francis College  
Stella Maris School

Windmill Point

49. NOTES FOR THE HYDROGRAPHER

Recoverable topographic station:

FER, 1943      T-11574

Photo-hydro stations:

- 27-01 Weather vane top of large tank.
- 02 Water gab white bldg
- 03 Corner of blkhd
- 04 Transmission tower (skeleton steel)
- 05 Highest rock, end of breakwater (awash MHW)
- 06 S. gab barn (attached to house)
- 07 Water gab yellow barn
- 08 Largest Chy on hospital
- T-11574 09 Crib work of logs (about 6 ft square)
- 10 End small pier
- 11 Lone white boulder (covered MHW)
- 12 Chimney on hospital
- 13 Large chimney 2 story white house
- 14 Chimney center small house
- 15 N W Gab bldg, tin roof
- 16 N E Cor bldg.
- 17 Water gab white cottage, green roof
- 18 Water gab brown shingle cottage, red roof
- 19 S. gab black roof shed
- 20 End small dark gray pier
- 21 Water gab barn
- 22 Flagpole on end small pier
- 23 Steeple atop barn
- 24 Peak of blue roof, 2 story white house
- 25 Chimney at peak of roof, 2 story white house, tin roof
- 26 Large gray chimney atop college
- 27 T of pipe at S W corner cement platform
- 28 Center 6 x 6 ft house on piles
- 29 S E corner abandoned pier
- 30 Water gab small yellow bldg, green trim.
- 31 E gable easternmost house, white, red roof
- 32 N. gab of northernmost cottage

**NONFLOATING AIDS OR HANDMARKS FOR CHARTS**

**STRIKE OUT ONE**

I recommend that the following objects which ~~have~~ *(have not)* been inspected from seaward to determine their value as landmarks be charted on ~~(attached)~~ the charts indicated.

The positions given have been checked after listing by A. K. Heywood

Baltimore, Maryland

28 March, 1955

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by

## NAUTICAL CHARTS BRANCH

SURVEY NO. ~~T-11573~~ & T-11574

### 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.