

11146

Diag. Cht. No. 1206.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Shoreline

Field No. Ph-114 Office No. T-11146

LOCALITY

State New Hampshire

General locality Portsmouth

Locality Sagamore Creek to Great Bay

1944 52-53

CHIEF OF PARTY

E.H.Kirsch, Chief of Field Party
I.R.Rubottom, Tampa Photo. Office

LIBRARY & ARCHIVES

DATE November 14, 1958

B-1870-1 (1)

11146

PRELIMINARY

DATA RECORD

T - 11146

Project No. (II): Ph-114(53)

Quadrangle Name (IV):

Field Office (II):

Chief of Party:

Photogrammetric Office (III): Tampa, Florida

Officer-in-Charge: J. E. Waugh

Instructions dated (II) (III):

Copy filed in Division of
Photogrammetry (IV)

Method of Compilation (III): Graphic

Manuscript Scale (III): 1:10,000

Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): None

Date received in Washington Office (IV): MAR 25 1952

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): N. A. 1927

Vertical Datum (III): M.H.W.

~~Mean Low Water~~ 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): GREENLAND ORTHODOX CH TALL SPIRE, 1850, 1908.

Lat.: 43° 02' 11".932 (368.2 m.) Long.: 70° 50' 01".922 (43.5 m.)

Adjusted
~~Unadjusted~~

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.

PRELIMINARY

DATA RECORD

Field Inspection by (II): NONE

Date:

Planetable contouring by (II):

Date:

Completion Surveys by (II):

Date:

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

Air Photo Compilation
(Office inspection only)

2 July 1952

Projection and Grids ruled by (IV): S. Rose (W.O.)

Date: 15 Feb. 1953

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

Date: 17 Feb. 1953

Control plotted by (III): R. E. Smith

Date: 3 Mar. 1953

Control checked by (III): R. R. Wagner

Date: 3 Mar. 1953

Radial Plot ~~on Stereoscopic~~
~~Control extension~~ by (III):

M. M. Slavney

Date: 16 Mar. 1953

Stereoscopic Instrument compilation (III):

Planimetry

Inapplicable
Contours

Date:

Date:

Manuscript delineated by (III): R. Dossett

Date: 20 Mar. 1953

Photogrammetric Office Review by (III): J. A. Giles

Date: 23 Mar. 1953

Elevations on Manuscript

checked by (II) (III): None

Date:

PRELIMINARY

DEPARTMENT OF AGRICULTURE
(Mark Hurd Mapping Co.)

Camera (kind or source) (III): Single-lens

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
DQW-10K-10	2 July 1952	11:15	1:10,000	2.35' 2.9 feet
" " 11	"	"	"	" "
" " 12	"	"	"	" "
" 9K-136	"	10:40	"	" "
" " 137	"	"	"	2.9 " "
" " 138	"	"	"	" "
" " 169	"	10:50	"	2.4 " "
" " 170	"	"	"	" "
" " 171	"	"	"	" "
" " 187	"	11:00	"	" "
" " 188	"	"	"	2.4 " "

Tide (III)

FROM PREDICTED TIDES

Reference Station: PORTLAND
Subordinate Station: DOVER PT
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
0.7	6.4	7.4

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):

Shoreline (~~More than 200 meters to opposite shore~~) (III): 9

Shoreline (~~less than 200 meters to opposite shore~~) (II):

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II): - Recovered: - Identified: -

Number of BMs searched for (II): 4 Recovered: - Identified: -

Number of Recoverable Photo Stations established (III): None

Number of Temporary Photo Hydro Stations established (III): 11

Remarks:

Summary to Accompany T-11146

Field instructions were issued for Ph-114 on 13 March 1953 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 C.S.-355, 6 March 1953, 29 January 1954, and 16 February 1955 - Gloucester Harbor, Massachusetts to Biddeford and Saco River, Maine.

T-11146 is one of Part A of the project. This part was compiled without benefit of field inspection.*Subsequent to the hydrographic work, the shoreline was revised to conform to information received from the hydrographic party.

~~A cloth-backed lithographic print~~
Cronar 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.

* The area of the project covered by the following radiot plot report and including map T 11146 was plotted and compiled without field inspection in order to provide support for unscheduled hydrographic surveys. Control was taken from a prior mapping project (1:20 000 scale sea mapping). Subsequent tests during hydrography indicated that accuracy was better than expected and adequate for hydro. support map 11139 was replotted to bring it up to acceptable standards. *Byg*

1.

PHOTOGRAMMETRIC PLOT REPORT.

21. AREA COVERED.

This photogrammetric plot was for Section A of Ph-114(53), comprising maps T-11139 to T-11147 inclusive. The maps cover the inland navigable waters in the area of Portsmouth, Newmarket and Dover, New Hampshire.

The sketch on Page 9 of this report shows the layout of maps, the identified control, photograph centers, index of control, adjoining map T-11148 of Section B, and 14 points common to the 1943 compilation and this plot.

22. METHOD.

Radial Plot:

Map Manuscripts: -- The map projections are on acetate at 1:10,000 scale with the polyconic projection in black, the New Hampshire Grid and the Maine West Mercator Grid in blue and red. The map manuscripts are 3'45" in latitude and 7'30" in longitude.

The base grids were vinylite with the 5,000 foot interval at 1:10,000 scale. The New Hampshire State Grid was on all the manuscripts so control was transferred to the grids by matching grid values and adjusting the scale differences.

Photographs: -- The photographs were single-lens taken in July 1952 at 1:20,000 scale by Mark Hurd Mapping Company for the Production and Marketing Administration of the Department of Agriculture and enlarged to approximately 1:10,000 scale.

Templets: -- Vinylite templets were made from the photographs using the distortion templet furnished by the Washington Office for photographs printed with the Saltzman projector.

Closure and adjustment to control: -- All the control that could be transferred from the 1943 field prints was identified on the 1952 photographs; and fourteen points were selected from the 1:20,000 manuscripts, as suggested in Paragraph 5 of the Instructions, dated 20 February 1953; reference 73-aal. These points are indicated on the sketch by letters A to O and are discussed under Item 24.

A preliminary radial plot disclosed a control discrepancy in T-11141. The templet DQW-9K-179, the first laid in the area, was fixed plus a check station and would not hold all the control. After several trial laydowns it was decided that DOVER, PACIFIC MILLS RED BRICK STACK, 1943 (No. 1 on sketch) was in error. This is discussed further under Item 23. T-11139

On the final radial plot, fixed templets were laid as follows:

DQW-10k-12, 13, 14, 15, 22, 23, 24 and 25; then

DQW-9k-123, 124, 176, 179, 184, 186 and 189

No more trouble was encountered with control but discrepancies were noted in eleven (11) of the fourteen (14) points identified and scaled from the 1943 compilations. These discrepancies on fixed templets revealed that the points (A to O on sketch) could not be held to supplement the control. (See Item 24 for discussion). The plot was continued and bridged across progressively weaker areas.

The area along the junction of T-11142 and T-11143 required the most adjustment. The interruption of azimuths on the photographs centered in the water made the plot more difficult and probably this is the weakest part of the work.

The photogrammetric points were transferred from the plot to the various manuscripts by adjusting to similar coordinate values.

23. ADEQUACY OF CONTROL.

All the control that could be transferred from the 1943 nine-lens photographs to the 1952 photograph was used excepting a few stations in the Portsmouth area where a plethora of control was identified. Two stations, TANK WINDMILL, 1908 (No. 9 on sketch) on T-11141, and NEWMARKET NAKEM CHAFEN CO. STACK, 1943 (No. 14 on sketch) on T-11142, could not be found on the 1952 photographs. The latter station was not needed because NEWMARKET INDUSTRIAL ASSOCIATION TANK, 1943 (No. 13 on sketch) was used, but TANK WINDMILL, 1908 would have helped. One station, YELLOW CUPOLA HORIZONTAL STRIPES, 1943 (No. 11 on sketch) on T-11141 was "not recovered" in 1943 but a cupola on a building in the area was identified and tried on the plot where it held. T-11142

Control station DOVER PACIFIC MILLS RED BRICK STACK, 1943 (No. 1 on sketch) on T-11139, fell on one photograph DQW-9k-179. This photograph was rigidly fixed plus a check station. After repeated trial laydowns bridging to other control it was decided that the "STACK" was at fault. It is noted that the 1943 identification card for this station was originally labeled "DOVER LARGEST SMOKE CHIMNEY" then changed with a new sketch made in the compilation office. Both stations are "No Check" intersection stations. No photogrammetric position was possible for DOVER PACIFIC MILLS RED BRICK STACK but the one cut from DQW-9k-179 fell 0.8 mm (8 meters) northeast of the plotted position. As an additional check an attempt was made to identify DOVER, FIRST PARISH CONGREGATIONAL CHURCH SPIRE, 1943 (No. 2 on sketch) but it fell on the edge of DQW-9k-179 and could not be positively transferred.

The adequacy of control for this plot is in doubt and is the subject of Item 26, ACCURACY AND RECOMMENDATIONS. (See paragraph 6, Instructions, dated 20 February 1953; reference 73-aal).

It is noted that some control plotted on the Ph-114(53) manuscripts was listed "Not recovered" in 1943 although they appear on the 1943 manuscripts. They are:

- T-11141 - OXSTER RIVER FLAG STAFF, 1908 (*base recovered*)
- T-11142 - MARSH, 1908
- T-11143 - POINT, 1908; TANK WINDMILL, 1908; BOILING ROCK, 1900; OLD WHARF WEST CORNER SPIRE, 1900; and SOUTH CHY. HOUSE OFF KITTELY JUNCTION R.R. STATION, 1900

24. SUPPLEMENTAL DATA.

Fourteen (14) points, A to O on the sketch, common to the 1952 photographs and the 1943 compilations, were scaled off the 1943 manuscripts and plotted on the base grid for this plot. The 1943 office photographs were not available and only one pass point on the 1:20,000 manuscripts could be positively identified in the areas desired on the 1952 photographs; the other points are details on the 1943 manuscripts that could be identified on the 1952 photographs. Three of these points were held:

"J" on sketch is YELLOW CUPOLA HORIZONTAL STRIPES,
1908, discussed in Item 22. ^{T-11141}

"B" and "M" on sketch, which fell on one photo-
^{T-11140} ^{T-11141} graph each and whose cuts held.

The points A to O are described and the position differences with the 1943 1:20,000 compilation are as follows:

POINT	MAP	DESCRIPTION	DISTANCE & DIRECTION OF THE PH-114(53) POSITION FROM THE 1943 POSITION
A	T-11140	NE corner of large building	0.7 mm (7 meters) E
B	T-11140	NE corner of large building	OK
C	T-11142	Intersection of roads	1.3 mm (13 meters) S
D	T-11145	Intersection of centerline of bridge and fender	1.8 mm (18 meters) E
E	T-11146	Intersection of road and R.R.	0.6 mm (6 meters) SW
F	T-11146	Intersection of roads	0.7 mm (7 meters) ESE
G	T-11143	E gable of large building	0.8 mm (8 meters) E
H	T-11143	E gable of large building	2.2 mm (22 meters) SW
J	T-11141	Cupola on building	OK (See Item 22) = Δ
K	T-11141	Intersection of road and R.R.	0.8 mm (8 meters) S
L	T-11141	N end of bridge fender	0.8 mm (8 meters) SE
M	T-11141	Intersection of roads	OK (one cut)
N	T-11144	Intersection of R.R. ^{and} overpass	1.0 mm (10 meters) ESE
O	T-11144	Center of bridge	0.9 mm (9 meters) SE

The 1952 photogrammetric position of these points are on the Ph-114 manuscripts as pass points.

25. PHOTOGRAPHY.

The instructions for this project, dated 2/20/53, included T-11139, T-11140, T-11141 and T-11144 for compilation as part of Section A, but photographic coverage was marginal in T-11140, T-11141 and T-11144, and inadequate in T-11139. — *see Supplement (p. 2)*

The forward lap was approximately 60% and the side-lap varied from 20% to 45%.

The prints, enlargements on positype paper using the distortion plate in the printer, were of good contrast and definition. Some tilt was noticed but not enough to merit special attention.

26. ACCURACY AND RECOMMENDATIONS.

The accuracy of this photogrammetric plot is in doubt because the scarcity of control was aggravated by the interruption of azimuths when several photograph centers fell in the water. (See sketch on page 9). Also the differences in 1943 compilation positions and the 1953 photogrammetric plot positions for the points tabulated in Item 24 must be considered in evaluating the accuracy of this plot notwithstanding the lack of any reports on the 1943 work. However, by all criteria the plot seemed very good. Furthermore, the intersections when cutting in detail points and the photo-hydro signals were checked and all were considered to be very good.

It is therefore recommended that the accuracy of this photogrammetric plot be checked by locating stations or substitute stations in the vicinity of the red circles shown on the sketch; that the points be cut in on the map manuscripts and then the field positions be plotted. If the radial plot positions of these points meet the required accuracy it is believed that the remainder of the plot is satisfactory, if not, the new control may be used in a new radial plot.

*-this does not
apply to
W. 1/2 of
T-11144
see Supplement Plot
p. 11.*

It is noted that of the proposed check points, "Circles 1, 2, 3 and 5 are in the area of triangulation stations shown on the 1943, and Ph-1114 manuscript, although the control identification card of 1943 on 1, 3 and 5 lists them "Not recovered".

Circle 1 - OYSTER RIVER FLAG STAFF, 1908

Circle 2 - TANK WINDMILL, 1908, identified on the 1943 photographs, could not be identified on the 1952 photographs, perhaps a substitute station from the footings of the old windmill, preferably about 400 meters east of the station.

Circle 3 - MARSH, 1908

Circle 5 - POINT, 1908

27. GENERAL.

A final check was made to insure proper transfer of all pass points, control and photograph centers to the material limits of all map manuscripts. "Dog-ears" for the photograph centers needed for compilation were added to complete the preparation of the map manuscripts.

Dates of completion of the radial plot are as follows:

T-11140 and T-11141	- - 11 March 1953
T-11143	- - 12 March 1953
T-11142 and T-11144	- - 13 March 1953
T-11145 and T-11146	- - 16 March 1953
T-11147	- - 18 March 1953

Respectfully submitted

Milton M. Slavney

Milton M. Slavney,
Cartographer,
Tampa Photogrammetric Office

APPROVED AND FORWARDED

J. E. Waugh

J. E. Waugh, Chief of Party

SUPPLEMENT TO PHOTOGRAMMETRIC PLOT REPORT.

The 1953 Photogrammetric Plot for T-11139, using the four single-lens contact prints 51-J-5979 through 51-J-5982 flown in 1951, was not considered tight enough for final hydrographic control because the photographic coverage was inadequate. A preliminary radial plot by the field party was extended by planetable survey E. C. F. P. Ab 53 to provide hydrographic control up the Salmon Falls River.

Attempts to reconcile the shoreline of the planetable sheet with the office compilation of T-11139 and planetable positions of some hydrographic signals with photogrammetric positions failed.

When notice of the impending visit of Mr. B. G. Jones, Technical Assistant to Chief, Photogrammetry Division, was received, it was decided to wait until this could be discussed with him.

A new photogrammetric plot with adequate photographic coverage for T-11139 of Section A, Ph-1114(53) was authorized in discussion with Mr. B. G. Jones and correspondence with Chief, Photogrammetry Division. See copy of letter which is included with this report.

The sketch on page 9 of this report shows the 1951 and the 1954 photographs, and the control used on the photogrammetric plot for T-11139.

The new photographs are single-lens taken on 29 April 1954 at approximately 1:20,000 scale with the Wild Camera. The prints are 2-diameter enlargements on acetate impregnated paper.

Vinylite templets were made from the prints. No provision was made for distortion correction.

Control and pass points used on the 1953 plot for T-11139 and T-11141 were transferred to the photographs used on this plot. Two triangulation stations, SOUTH BERWICK LARGE BLACK TANK, 1908, and SOUTH BERWICK ACADEMY LARGE STONE CUPOLA, 1908, were transferred from the 1943 field photographs to control the north end of the north-south flight.

The plot was run on the manuscripts by laying the two flights simultaneously. The north-south flight was started with photograph 54-W-1364 and ended with 54-W-1369. The east-west flight was started with fixed photograph 54-W-1372 and tied into the north-south flight with 54-W-1373.

All the control was held. PACIFIC MILLS RED BRICK STACK, 1943, which fall on the edge of one photograph on the 1953 plot and which was

COPY

8

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON 25

AND REFER TO NO. 711-aal

10 March 1954

To: Officer-in-Charge
U. S. Coast and Geodetic Survey
Tampa Photogrammetric Office
P. O. Box 1689
Tampa, Florida

Subject: Additional photographs for map T-11139,
Project Ph-114A

Reference: Your discussions with Mr. B. G. Jones at Tampa

We find no available photography in T-11139 in addition to that already furnished you. However, we are going to schedule a short single-lens flight in this area to strengthen your plot of the shoreline. These photographs should be available about 1 May 1954.

Manuscript T-11139 should be held at Tampa for use of the new photography unless the Norfolk Office has some urgent need for the shoreline that will not permit waiting until May. Please inform me if you have any questions about this.

/s/ O. S. Reading

O. S. Reading
Chief, Div. of Photogrammetry

COPY

P. O. Box 592, Newburyport, Mass.

9
COPY

7 October 1953

To: The Director
U. S. Coast and Geodetic Survey
Washington 25, D. C.

Subject: Project Ph-114 (Area A)

Reference: Letter dated 30 April 1953 - 711-sal

Enclosed is a letter transmitting the manuscripts and photographs covering Area A of Project Ph-114; and the Form 2226-12 and computations of the various check points required by the reference letter.

A short comentary on each of the points located for test purposes follows:

TEST POINT NO. 1 -- This point was located as a sub point for station "OYSTER RIVER FLAGSTAFF 1908". This station was reported destroyed in 1943 but an investigation showed that the base of the pole was still in position even though the staff had been cut down. Consequently, this remnant of the station was used to locate a sub point which, when radially plotted, checked the computed position within 3 meters.

* TEST POINT NO. 2 -- This point was located, as requested by the Tampa Office, in the sidelap areas of Photos DQW-9K-179 and 180. The traverse was run from station "TANK WINDMILL 1908". As the station, an intersected object, could not be occupied, and since no azimuth was visible from the ground, the traverse was based on a Polaris Observation taken between Points 1 and 2 of the traverse. The azimuth was then carried back to the first line, reverses by adding 180 degrees, and the traverse computed by Geographic Positions. The radial plot position of the sub point checked the computed position within 6 meters. The computation of this traverse has not been checked in the field and should be checked before the result is considered final. This was taken up with Capt. Reading on his visit here and it is with his permission that the traverse is submitted without having been checked.

TEST POINT NO. 3 -- In order to locate Test Points 3, 4, and 5, single triangles were observed to establish marked stations, which were then used to establish positions for sub points. In this particular area, a marked triangulation station (WATSON 1953) was established, and the sub point was located by laying out a base at the station and observing on the sub point from both ends of the base. The computed position of the sub point checked the radial position almost exactly.

TEST POINT NO. 4 - - A marked topographic station, WEEK 1953, was established as a no check position from the two marked triangulation stations mentioned above, and the test point was computed as a sub point for this station. The computed position checked the radial plot position within 5 meters.

TEST POINT NO. 5 - - This test point was established as a sub point for triangulation station "POINT 2 1953" which was located by single triangle. The sub point is also a pass point on the manuscript, and the computed position checked the plotted position with 4 meters.

The various stations numbered and required for identification on the diagram on Page 6 of Reference 3 of the reference letter, were identified with the exception of No. 14 which was found to have been destroyed.

Form 2226-12 for the following numbered stations were sent to Tampa for the compilation of sheet 11147 and should be secured from that office.

- NO. 37 - STARK 145 1941
- NO. 39 - FROST POINT 144 1941
- NO. 40 - ODIORNES POINT 143 1941
- NO. 41 - PULPIT ROCK 142 1941
- NO. 44 - RYE LEDGE 139 1941

A complete list of the recovery, identification and establishment of the stations in this area is enclosed with the field data.

Computations of Geographic Positions for the two permanently marked triangulation stations will be forwarded to the Division of Photogrammetry for submission to the Division of Geodesy. Pierce Id Ry F '53
" " Ry R '5

With regard to sentence 2 of paragraph 3 of the reference letter, numerous sub points were selected during the field work in sheets 11147 and 11144, and should satisfy the stipulation for identified control in sheet 11168.

*	*	*	*
*	*	*	*

Respectfully submitted,

John C. Lajoye
Cartographer, USC&GS

*

An error in the traverse computation for Test Point No. 2 moved the geographic position to within about two meters of the radial plot position.

TAMPA PHOTOGRAMMETRIC
OFFICE

not held at that time, was held on this plot when the transfer was corrected.

It is noted that the triangulation symbol for Elliot Greenhouse #8 Stack, 1943, on the 1943 1:20,000 compilation T-8527, is shown around a "prick-hole" that is 73 meters 341° in azimuth from a "prick-hole" that is the true position of the STACK. Examination revealed that the published quadrangle DOVER EAST N.H., ME. shows the station symbol with the same error. This station falls on T-11141 of this project.

The photographs are sharp and of excellent contrast. Some tilt was observed but none severe enough to justify computation.

Agreement between the 1953 photogrammetric plot and this one varied from 0.0 mm in the western portion to 1.2 mm (12 meters) at the eastern limits of the 1953 plot.

It is believed that this plot meets the accuracy requirements.

There follows a comparison of the radial plot positions and the field positions for the five check points called for in Item 26 of the Photogrammetric Plot Report for Section A of Ph-114(53). Reference letter dated 10/7/53 to the Director from Mr. J. C. Lajoie (copy attached).

POINT	DISTANCE AND DIRECTION OF FIELD POSITION FROM PHOTOGRAMMETRIC POSITION
Test Point No. 1) T-11141	3 meters south
Test Point No. 2) T-11142	2 meters north
Test Point No. 3) T-11143	0.0
Test Point No. 4) T-11144	5 meters southeast
Test Point No. 5) T-11145	4 meters west

Respectfully submitted,

Milton M. Slavney
Milton M. Slavney
Cartographer
Tampa Photogrammetric Office

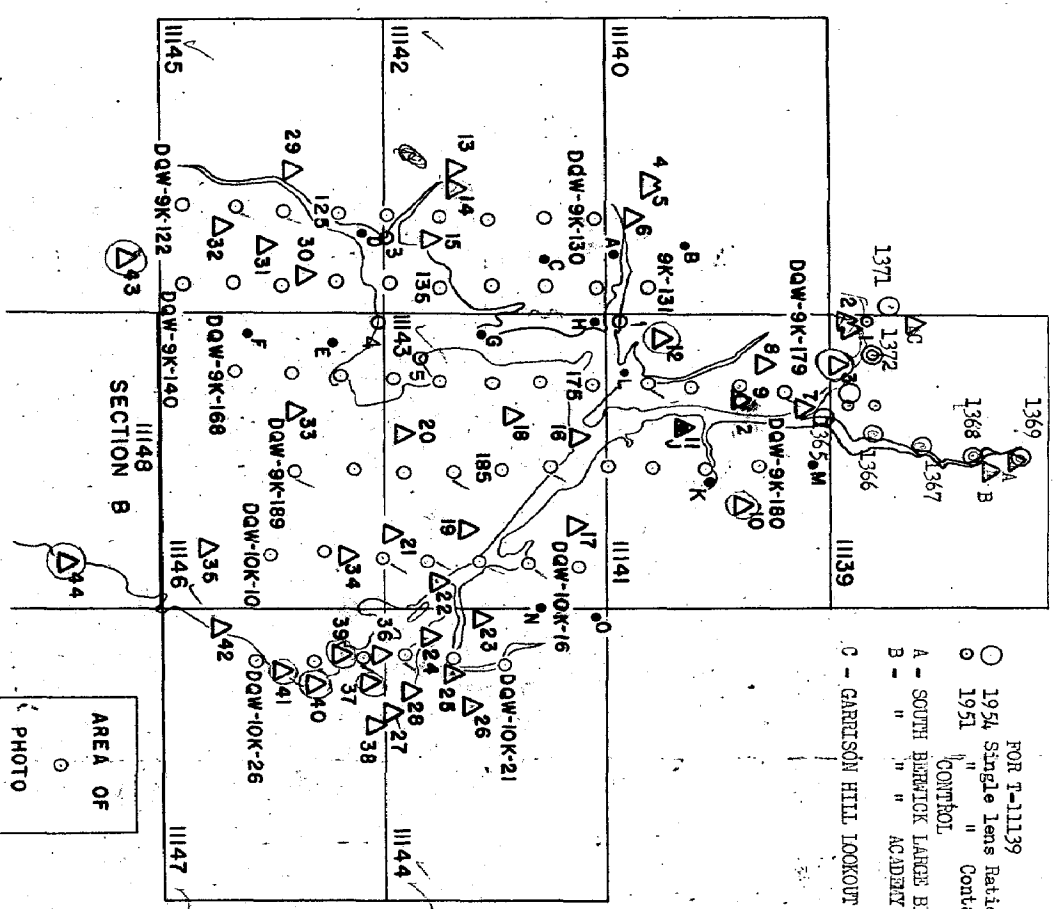
APPROVED AND FORWARDED:

Ira R. Rubottom
Ira R. Rubottom, Chief of Party

FOR T-11139

- 1954 Single Lens Ratio Print (Wild)
- 1951 " " Contact Print
- CONTROL

- A - SOUTH BEEFICK LARGE BL. TANK
- B - " " ACADREY LARGE STONE
- C - GARRISON HILL LOOKOUT TOWER



- △ HORIZONTAL CONTROL STATION
- POINTS COMMON TO 1943 COMPILATION
- CENTER OF SINGLE LENS PHOTOGRAPH

SKETCH FOR REPORT ON
PHOTOGRAMMETRIC PLOT
FOR PH-114(53) SECTION A

INDEX OF CONTROL

1. DOVER, PACIFIC MILLS RED BRICK STACK, 1943
2. DOVER, FIRST PARISH CONG. CHURCH SPIRE, 1943
3. SUB. PT. DOVER, 1908
4. UNIV. OF N. H., DURHAM, TANK, 1943
5. UNIV. OF N. H., DURHAM, STACK, 1943
6. DURHAM, COMMUNITY CHURCH SPIRE, 1850
7. GRAY BARN CUPOLA, 1908
8. ELLIOT GREENHOUSE STACK, 1943
9. TANK WINDMILL, 1908
10. SUB. PT. FROST, 1908
11. YELLOW CUPOLA, HORIZONTAL STRIPES, 1908
12. SUB. PT. WENT, 1908
13. NEWMARRET, INDUSTRIAL ASSN. TANK, 1943
14. NEWMARRET, LAKEN CHAPEN CC., STACK, 1943, destroyed
15. YELLOW BARN CUPOLA, 1908
16. NEWINGTON R. R. STATION, NW CHIMNEY, 1908
17. KITTERY WATERWORKS STANDPIPE, 1943
18. NEWINGTON CHURCH, SQUARE SPIRE, 1850-1908
19. WENTWORTH AERES, TANK, 1943
20. FRANK JONES STANDPIPE, 1908
21. PORTSMOUTH STANDPIPE, 1928
22. PORTSMOUTH NORTH CHURCH SPIRE, 1900
23. KITTERY, SEWARD M. E. CHURCH CUPOLA, 1900
24. PORTSMOUTH NAVY YARD, STANDPIPE, 1915
25. KITTERY POINT CONG. CHURCH SPIRE, 1900
26. KITTERY POINT BAPTIST CHURCH SPIRE, 1898
27. WOOD ISLAND COAST GUARD CUPOLA, 1917
28. PORTSMOUTH HARBOR L.H., 1878
29. NEWFIELDS UNIVERSALIST CHURCH, TALL SLENDER SPIRE, 1908
30. STRATHAM HILL FIRE TOWER, 1941
31. STRATHAM, SQUARE CHURCH SPIRE, 1908
32. STRATHAM, TALL CHURCH SPIRE, 1908
33. GREENLAND ORTHODOX CHURCH TALL SPIRE, 1908
34. WHEB, RADIO TOWER, 1941
35. HYR ORTHODOX CHURCH SPIRE, 1850
36. WENTWORTH HOTEL, HIGHEST CUPOLA, OLD BUILDING, 1898
37. SUB. PT. STERK 145, 1941
38. WHALEBACK L.H., 1878
39. SUB. PT. FIRST POINT 144, 1941
40. SUB. PT. O'DONOGHES POINT 143, 1941
41. PULPIT ROCK 142, 1941
42. OCEAN WAVE HOTEL CUPOLA, 1898
43. SUB. PT. ROLLINS, 1941
44. SUB. PT. RYE LEDGE, 1941

*Not identifiable on the 1952 photographs used in this radial plot.

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MAP T. 11146
PROJECT NO. .... Pk-114 ..... SCALE OF MAP 1:10,000
SCALE FACTOR .....

```

[illegible]

1 FT. = 3048006 METER

COMPUTED BY: I.I. Saperstein.....

DATE 26 Feb. 1953

CHECKED BY: R. E. Smith

DATE 2 March 1953...

M-2388-12

~~7~~

PRELIMINARY

COMPILATION REPORT T-11146

PHOTOGRAMMETRIC PLOT REPORT.

This report ^{is} ~~will be~~ submitted ^{with this report.} ~~at a later date.~~

31. DELINEATION.

The graphic method was used.

The photographs were of reasonably good scale. All detail points have been established by the intersection of three or more radial lines.

32. CONTROL.

Sufficient pass points were adequately located by the radial plot to accurately control each photograph.

33. and 34.

Inapplicable.

35. SHORELINE AND ALONGSHORE DETAILS.

The high-water line was located by stereoscopic study of the photographs and delineated accordingly.

The limits of alongshore areas, outside of the H. W. L., which may be shallow, shoal, grass-in-water, marsh, grass-and-mud or mud have been delineated approximately by a black dashed line. It is requested that these areas be investigated and properly classified.

All piers apparent on the photographs have been delineated.

36. OFFSHORE DETAILS.

None noted.

~~SECRET~~

PRELIMINARY

37. LANDMARKS AND AIDS.

These are to be located by the hydrographer.

38. CONTROL FOR FUTURE SURVEYS.

Recoverable topographic stations, Forms 524, located on T-8531 were examined; however, since none appeared to be usable as photo-hydro stations and since the field photographs on which these stations were identified in 1943 were not available no attempt was made to locate them on this survey.

Eleven (11) temporary photo-hydro stations are shown. These have been listed under Item 49.

39. JUNCTIONS.

Satisfactory junction has been made with T-11143 on the north and T-11145 on the west. T-11148 on the south has not been compiled. No shoreline details extend to the neat line to make junction with T-11147 on the east; however, in the northeast corner detail has been shown twenty seconds inside T-11168, scale 1:5,000, which will be compiled by the Washington Office.

40. HORIZONTAL AND VERTICAL ACCURACY.

Reference Photogrammetric Plot Report relative to horizontal accuracy.

PRELIMINARY

46. COMPARISON WITH EXISTING MAPS.

Comparison was made with USC&GS Quadrangle T-8531 (*Portsmouth*).
No outstanding shoreline differences were noted.

47. COMPARISON WITH NAUTICAL CHARTS.

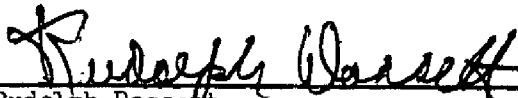
Comparison was made with USC&GS Nautical Chart 229, scale 1:30,000, published November 1914 and corrected to 26 January 1953. No outstanding discrepancies of shoreline were noted.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY.

None.

ITEMS TO BE CARRIED FORWARD.

None.


Rudolph Dossett,
Cartographic Photogrammetric Aid

APPROVED AND FORWARDED:


J. E. Waugh, Chief of Party

PRELIMINARY

48. GEOGRAPHIC NAME LIST.

Only base map names have been shown. They were taken from USC&GS Nautical Chart No. 229.

PRELIMINARY

49. NOTES FOR THE HYDROGRAPHER.

A number of temporary photo-hydro stations were selected in the Tampa Office for use by the hydrographer. The stations selected and pricked on the photographs consist principally of lone trees, bushes, gables of houses, tanks, chimneys, transmission towers, piers and the like. An effort was made to select stations about one-quarter of a mile apart; however, it was impossible in certain areas to prick any object whatsoever which could be positively recovered in the field. In small coves and inlets, wherever possible, photo-hydro stations were pricked at closer intervals in order that a fix might be obtained readily.

The number and description of each temporary photo-hydro station follows:

<u>NUMBER</u>	<u>DESCRIPTION</u>
126 . <i>RIM</i>	Lone tree in open area.
127 .	The most southerly bush of three in row, about 5 m. inshore.
128 .	Large lone tree in open area, about 55 m. inshore.
129 .	Lone tree in open area, about 10 m. west of bend in small stream.
130 .	Lone bush at east edge of open area. <i>Pierce Pt</i>
131 . <i>YES</i>	Most northerly tree on point of land, at waters edge.
132 .	Lone bush, the most southerly of three, about 5 m. inshore. "
133.	Northeast corner of pier. <i>Weeks Pt</i>
077 .	Center of roof, at north end of house.
078 .	Northeast corner of pier.
083 .	The most southerly tree in line of trees, along shore.

Distances from sh. estimated prior to addition of fringing marsh.

50.

PHOTOGRAMMETRIC OFFICE REVIEW

T. 11146

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

CONTROL STATIONS

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

ALONGSHORE AREAS

(Nautical Chart Data)

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

PHYSICAL FEATURES

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

CULTURAL FEATURES

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

BOUNDARIES

31. Boundary lines XX 32. Public land lines XX

MISCELLANEOUS

33. Geographic names J.G. 34. Junctions J.G. 35. Legibility of the manuscript J.G. 36. Discrepancy overlay XX 37. Descriptive Report J.G. 38. Field inspection photographs XX 39. Forms J.G.
40. Jesse A. Miles William A. Rasure
Reviewer 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

DATA RECORD

T- 11146

(Reference Preliminary Report for data not listed)

Project No. (II):

Quadrangle Name (IV):

Field Office (II): NEWBURYPORT, MASSACHUSETTS

Chief of Party: E. H. Kirsch

Photogrammetric Office (III): TAMPA, FLORIDA

Officer-in-Charge: Ira R. Rubottom

Instructions dated (II) (III): Reference Preliminary Report

Copy filed in Division of
Photogrammetry (IV)

Supplement 1 - 28 March 1953

" 2 - 30 April 1953

" 3 - 6 May 1953

" 4 - 26 May 1953

" 5 - 25 June 1953

Method of Compilation (III):

Manuscript Scale (III):

Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III):

Date received in Washington Office (IV):

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III):

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

Unadjusted

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.

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

Date:

Date:

Date:

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

Date:

Date:

Date:

Date:

Date:

Date:

Date:

Date: 15 March 1954

Date: 19 March 1954

Date:

4

(Reference Preliminary Report for data not listed)

Camera (kind or source) (III): Fairchild Cartographic Camera J

PHOTOGRAPHS (III)

Number Date Time Scale Stage of Tide

Reference Preliminary Report

53-J-300	22 April 1953	928	1:10,000	3.8
53-J-301	"	929	"	"
53-J-302	"	929	"	"

Tide (III)

From Predicted Tides

Reference Station: Reference Preliminary Report

Subordinate Station:

Subordinate Station: SEAVY ISLAND

Ratio of Ranges	Mean Range	Spring Range
0.9	8.1	9.4

Washington Office Review by (IV):

Lena T. Stevens

Date: 12 Dec. 1955

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): 1

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

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

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II):

Recovered: 1

Identified: 0

Number of BMs searched for (II):

Recovered:

Identified:

Number of Recoverable Photo Stations established (III): 1

Number of Temporary Photo Hydro Stations established (III): 19

Remarks:

Eight (8) photo-hydro stations were established by the photogrammetric field party

COMPILATION REPORT T-11146

PHOTOGRAMMETRIC PLOT REPORT

Submitted ^{with this report} ~~under separate cover~~.

31. DELINEATION

Reference Item 31 of Preliminary Report.

32. CONTROL

Reference Item 32 of Preliminary Report.

33. SUPPLEMENTAL DATA

Reference Item 33 of Preliminary Report.

34. CONTOURS AND DRAINAGE

Reference Item 34 of Preliminary Report.

35. SHORELINE AND ALONGSHORE DETAILS

Reference Item 35 of Preliminary Report.

Shoreline changes in red were made from information obtained from a member of the hydrographic party which did the work in this area.

The low-water lines, as interpreted from the hydrographic sheet, were applied to the manuscript in red pencil, but no corresponding markings or lines were discernible on the photographs. The compiler inadvertently destroyed these lines while cleaning the surface of the map manuscript.

36. OFFSHORE DETAILS

Reference Item 36 of Preliminary Report.

37. LANDMARKS AND AIDS.

Reference Item 37 of Preliminary Report

38. CONTROL FOR FUTURE SURVEYS

Reference Item 38 of Preliminary Report.

Eight (8) additional photo-hydro stations were established by the photogrammetric field party and their positions checked in the Tampa Office with no changes noted. They have been listed under Item 49.

One (1) Form 524 is being submitted for a topographic station. It is listed under Item 49.

39. JUNCTIONS

Reference Item 39 of Preliminary Report

40. HORIZONTAL AND VERTICAL ACCURACY

Reference Item 40 of Preliminary Report

46. COMPARISON WITH EXISTING MAPS

Reference Item 46 of Preliminary Report

47. COMPARISON WITH NAUTICAL CHARTS


Reference Item 47 of Preliminary Report

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None.


Rudolph Dossett
Carto Photo Aid

APPROVED AND FORWARDED.

William A. Resure
for Ira R. Rubottom, Chief of Party

48. GEOGRAPHIC NAME LISTBAYSIDE ROAD~~BAYSIDE STATION~~

(B.G.N. decision is Bayside)

BOSTON AND MAINE RAILROADBRACKETT BROOKELWIN ROADGREAT BAYGREENLAND ROADGREENLAND STATIONLAFAYETTE ROADNEW HAMPSHIRENEWINGTON ROADPACKER BROOKFEVERLY HILL ROADPICKERING BROOKPIERCE POINTPortsmouth (title only)SAGAMORE CREEKSAGAMORE HILLSHAW BROOKSOUTH STREET CEMETERYU S 1WEEKS POINTWINNICUT RIVERNames approved
12-12-55. L. Heck

49. NOTES FOR THE HYDROGRAPHER

The following photo-hydro stations were established by the photogrammetric field party:

ROT	Center of rock	
YAW	Cupola of white barn	
TEE	South gable of white house	
TAC	Incinerator stack	} Sagamore Creek area
SID	End of dock	
JUD	NW Gable of house	
	- Northeast gable of house	
	- Gable of red house extension	

Reference Item 49 of Preliminary Report for other photo-hydro stations.

Form 524 is submitted for the following topographic station:

WEEK, 1953

50.

PHOTOGRAMMETRIC OFFICE REVIEW

T. 11146

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(Nautical Chart Data)

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Reviewer Supervisor, Review Section or Unit

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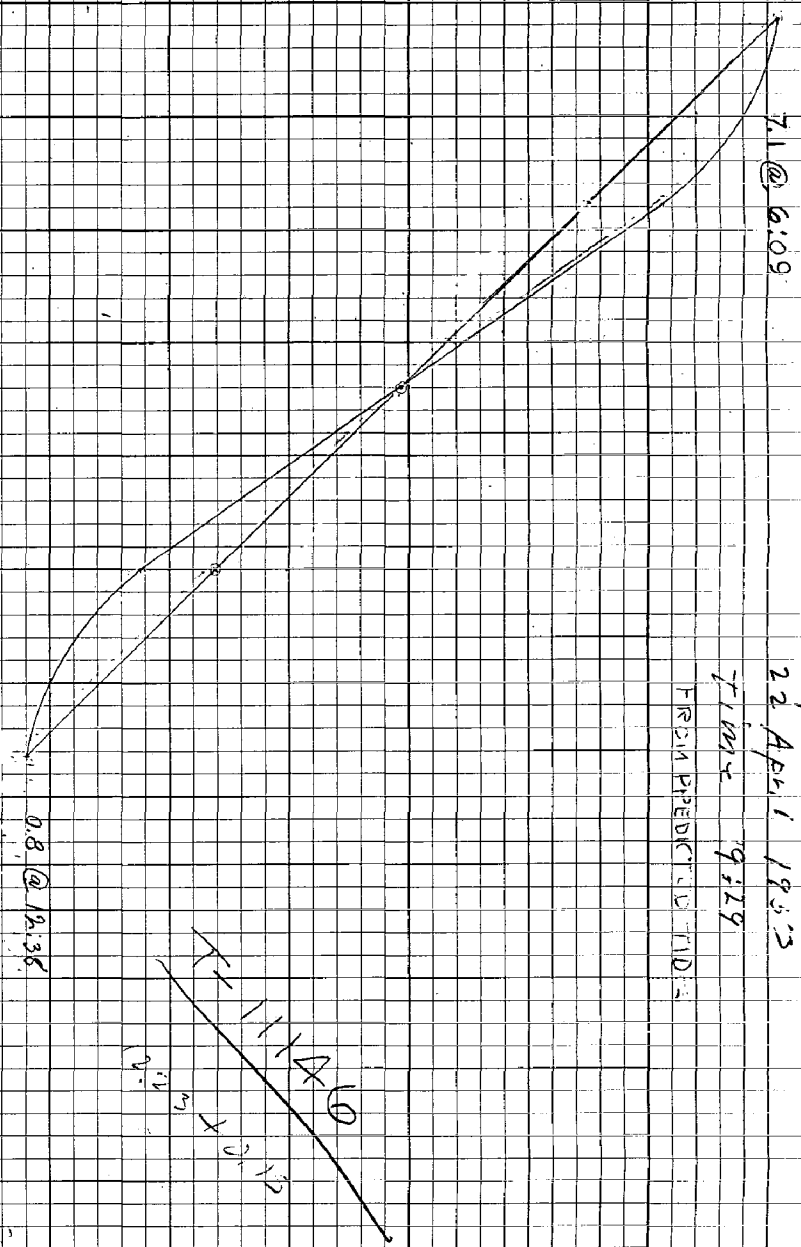
Supervisor

43. Remarks:

7 7.1 @ 6:09

Seaway Island - Portland 53-4 photos
22 April 1953

Time 9:19
FROM PREDICTED TIDE



K1 11X40
2.113 X 0.113

Review Report, T-11146
Shoreline Map
12 December 1955

62. Comparison with Registered Surveys:

T-2905 1:10,000 1908 Great Bay
T-2375 1:10,000 1898-9, 1901 Portsmouth Harbor

Because of natural and cultural changes, T-11146 supersedes the older surveys for shoreline and planimetry. o

63. Comparison with Maps of Other Agencies:

USE Portsmouth Harbor, 1:25,000, 1944 (USC&GS compilation T-8531, 1944)

The maps are in general agreement, except that T-11146 has a fringing marsh along much of the shoreline, and, because of the lack of field inspection, there are not so many buildings in the Weeks Point area where trees mask any building that may be there.

Except for the buildings in the Weeks Point area T-11146 supersedes the quadrangle for charting.

64. Comparison with Contemporary Hydrographic Surveys:

H-8092 (ECFP 1553) 1:10,000, 1953 Maine-N.H. bridge to Dover Pt.
(Piscataqua River)
H-8093 (ECFP 1653) 1:10,000, 1953 Squamscott River, Lamprey River,
Great Bay

T-11146 shoreline is the same as that on the hydrographic surveys.

65. Comparison with Nautical Charts:

229 1:30,000, Nov. 1914, corr. Jan. 1953

Except for contours and the low bluff symbol in fast land areas, T-11146 supersedes the chart in their common area.

66. Accuracy:

~~Interior delineation (except as noted in 63, Paragraph 2), meets the national standards of accuracy. Shoreline is delineated as accurately as office interpretation permits. The radiol plot was not up to usual standards. However, the mapping in this area has proved adequate for hydrographic support and is adequate for charting the shoreline and adjacent areas D.G. Jones 4/8/58~~

Reviewed by:

Lena T. Stevens
Lena T. Stevens

Infra-red photography taken at the proper time would resolve this shoreline map for all. It is suggested when (over)

APPROVED BY:

*a plane is available this area be
photographed with Infra-red
L. Swanson*

L. C. Lande

Chief, Review Section
Photogrammetry Division

Max Skellett

Chief, Nautical Chart Branch
Charts Division

L. W. Swanson

Chief, Photogrammetry Division

[Signature]

Chief, Coastal Surveys Division

14 Nov 1958 *MS*