

11336

(see page 6 of this report)

Diag. Cht. No. 1210-2.

Form 504	
U. S. DEPARTMENT OF COMMERCE	
COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey <u>Shoreline</u>	
Field No. <u>Ph-116</u>	Office No. <u>T-11336</u>
LOCALITY	
State <u>Massachusetts</u>	
General locality <u>Cape Cod</u>	
Locality <u>Woods Hole Harbor</u>	
<u>1948-53</u>	
CHIEF OF PARTY	
<u>L. J. Reed</u>	
LIBRARY & ARCHIVES	
DATE <u>May 1963</u>	

USCOMM-DC 5087

11336

DATA RECORD

T-11336

Project No. (II): Ph-116

Quadrangle Name (IV):

Woods Hole

Field Office (II):

Chief of Party:

Photogrammetric Office (III):

Washington, D.C., Officer-in-Charge:

Stereoscopic Mapping Branch, Louis J. Reed

Instructions dated (II) (III):

Copy filed in Division of
Photogrammetry (IV)

20 Nov 53

Method of Compilation (III): Kelsh Plotter

Manuscript Scale (III): 1:5,000

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

Scale Factor (III): Photos::Inst::Manuscript = 20,000::4,000::5,000

Date received in Washington Office (II): FEB - 3 1954

Date reported to Nautical Chart Branch (IV): 3-1-54

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
Unadjusted

Plane Coordinates (IV):

State:

Zone:

Y=

X=

two Massachusetts grids:

Island Zone with 2,000ft spacings

Mainland Zone with 2,000ft spacings

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 controlled by various personnel
 (Show name within area)
 (X) (III)

Compilation by Frank J. Lesslie
 on the Kelsh Plotter, model "A".

DATA RECORD

Field Inspection by (II): ~~None~~

Date: 1948

Planetable contouring by (II):

Date:

Completion Surveys by (II):

Date:

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

The shoreline is primarily instrument delineated from the
instrument photographs which were dated Oct 1951 and July 1952.

Projection and Grids ruled by (IV): Austin Riley on the Reading
Ruling Machine

Date: 9 Nov 53

Projection and Grids checked by (IV): Austin Riley

Date: 10 Nov 53

Control plotted by (III): Stanley W. Trow

Date: 3 Dec 53

Control checked by (III): Louis J. Reed

Date: 4 Dec 53

Radial Plot or Stereoscopic
Control extension by (III): None required

Date:

Planimetry Frank J. Lesslie
Stereoscopic Instrument compilation (III):
Contours

Date: 20 Jan 54

Date:

Manuscript delineated by (III): John B. McDonald

Date: 28 Jan 54

Photogrammetric Office Review by (III): Louis J. Reed

Date: 5 ^{FEB} Jan 54Elevations on Manuscript
checked by (II) (III):

Date:

Camera (kind or source) (III): DPL 6" wide-angle, and
USC & GS 6" wide-angle, model "J"
PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
DPL-5K-135	26 Jul 52		20,000 ✓ (Ratioed)	1.8'
136	"			
137	"			
DPL-2K-144	22 Oct 51			
145	"			
48-J-918 thru 921	2 May 48		10, Field inspected 1/10,000 5,000 (Ratioed)	0.9' above MLW
48-J-927 and 928	"			
53-J-551, 2	9 May 53	11:35	5,000 ✓ (Ratioed)	0.2ft above ? MLW
53-J-555, 6	"			
53-J-563 thru 569	"			

Tide (III)

Reference Station: (Mr Wilcox)
Subordinate Station:
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range

Washington Office Review by (IV):

Date:

Final Drafting by (IV): J Hicks

Date: 2-20-61

Drafting verified for reproduction by (IV): WO Halpin

Date: 2-23-61

Proof Edit by (IV):

Date:

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

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

Shoreline (Less than 200 meters to opposite shore) (III): About 24 miles (combined)

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II):

Recovered:

Identified: 9

Number of BMs searched for (II):

Recovered:

Identified:

Number of Recoverable Photo Stations established (III):

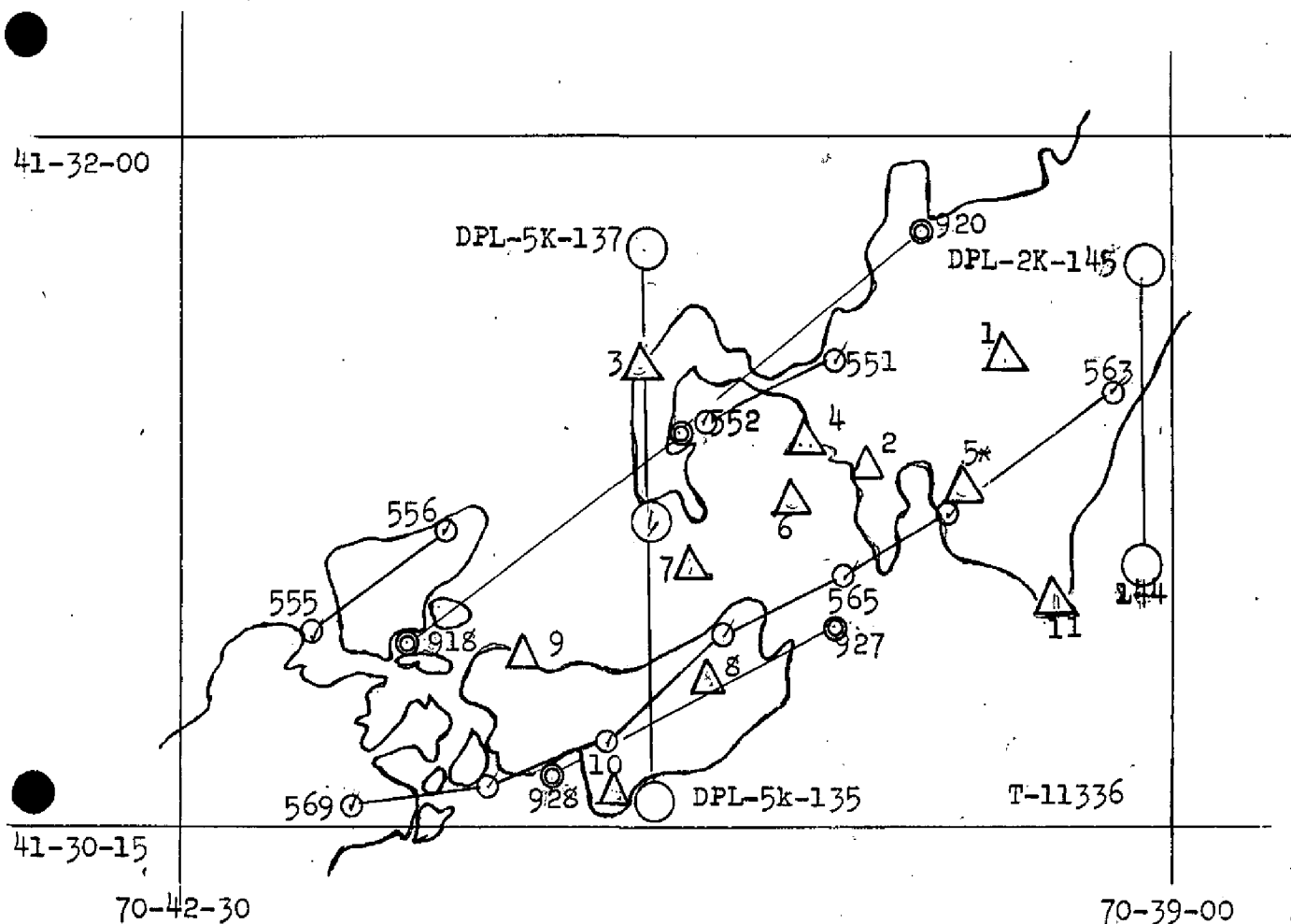
Number of Temporary Photo Hydro Stations established (III): 48 69

Remarks: Photos 55 W are 1/30,000

Photos 55 W 2442 1/30,000

2183

PHOTO & CONTROL SKETCH



- 1. Woods Hole, Yellow Stone Tower, 1928
- 2. Woods Hole, Oceanographic Institute Dome, 1932
- 3. McGarrah, 1938
- 4. Fish Commission Cupola, 1887
- 5. Church of Messiah Steeple, 1938 *
- 6. Red Beacon, 1938
- 7. Black Beacon, 1938
- 8. Allen, 1938
- 9. Hadley, 1938
- 10. House Weather Vane, 1938
- 11. Nobska Point Lighthouse, 1904

- = Instrument Photography
- ⊙ = Field Inspection Photography
- △ = Low-water Photography
- * = Not held during compilation

ADDENDUM

A stereoplanigraph bridge performed in 1961 on infrared photography, as a part of Project 6102, covers the area mapped through survey T-11336. A chart drawing of topography, Chart 348, scale 1:5,000, based on the 1961 bridge, has been compiled by photogrammetric methods.

T-11336 has local errors in the position of details amounting to more than 2 mm in some instances. Errors in the survey are probably due to the poor quality of the photography and poor field inspection.

The new Chart Drawing, No. 348^{*}, supersedes survey T-11336 for charting purposes.

S. G. Blankenbaker
S. G. Blankenbaker

* Registration No. T-12501

COMPILATION REPORT

31. Delineation:

The shoreline and other features on this compilation were delineated with a Kelsh Plotter, model "A". The project area has been completely mapped.

32. Control:

Three instrument models covered the area. Sufficient horizontal control was field identified to control the individual models in position and scale, and a great deal of shoreline permitted leveling of the models. Horizontal control for this survey are listed on a separate page, form M-2388-12. Triangulation stations in the area, and those used to control the work, are identified on the Photo & Control Sketch, page 5. All identified stations were held, except topo station DUDE, 1948 (no GPs available), and Δ FALMOUTH HEIGHTS WATER TANK, 1904, which fell outside the mapped area. Other Δs (unidentified) in the area were also held, except for CHURCH OF MESSIAH STEEPLE, 1938.

33. Supplemental Data:

- a. Special Reports: None
- b. Graphic Control Surveys: None *Prior Surveys T-6621-22*
- c. Field Inspection (1948) Photos: 48-J-918, 19, 20, 27, and 928.

34. Contours and Drainage: Not applicable.35. Shoreline and Alongshore Details:

Shoreline inspection was more than 5 years old at the time of this compilation but it was used as a reference during the instrument delineation because it was the best available. Generally, the field inspection shoreline was found to be correct, deviations from it being infrequent. *How did they know? S.S.S?*

Low-water lines, foul lines, and foreshore features were located, for the most part, by stereoscopic identification on the low-water photographs (5-9-53-J 551, 552, 555, 556, and 563 thru 569), after ratioing them to the scale of the manuscript (1:5,000), and traced direct onto the manuscript by holding hydro stations identified originally on the instrument model, transferred to the low-water photos, and positioned on the manuscript. It is expected that this compiled shoreline will be field edited during 1954 hydro, inshore.

36. Offshore Details: None37. Landmarks and Aids:

Several of each exist but field inspection did not identify them.

38. Control for Future Surveys:

- a. Hydro Stations: See side-heading 49
- b. 3-Point Fix: See Control Station Identification card, form M-2226-12, for data regarding point on Great Harbor Range which has been plotted and labled on the Manuscript.

39. Junctions: None40. Horizontal and Vertical Accuracy:

This compilation meets the requirements for a 1:5,000 scale map as specified by National Map Accuracy Standards.

41. Low-Water Ratios:

These were prepared for use in locating additional hydro signals in the field. The photos have excessive tilt and it is therefore recommended that points be/pricked direct by holding to office-located hydro stations on either side of the shoreline area where the new signal is located; do not attempt location by radial cuts.

46. Comparison with Existing Maps:

USGS Quad WOODS HOLE, MASS, 1:31680, edition of 1941, revised in 1942, reprinted in 1943.

47. Comparison with Nautical Charts:

UNITED STATES - EAST COAST, MASSACHUSETTS, WOODS HOLE, Chart No. 348, 1:10,000, 11th edition of Jan 36, revised 21 Jul 52.

ITEMS TO BE APPLIED TO NAUTICAL CHART IMMEDIATELY: Several piers and jetties are not on the chart that appear in the photographs.

ITEMS TO BE CARRIED FORWARD: None.

48. Geographic Name List: Not applicable.49. Notes for The Hydrographer: See separate list, 2 pages.50. Compilation Office Review: See separate page (T-2).

submitted by:

Stanley W. Trow
Stanley W. Trow, Chief,
Single Lens Plotter Section

approved by:

Louis J. Reed, Chief
Stereoscopic Mapping Branch
Photogrammetric Engineer

MAP T 11336 PROJECT NO. Ph-116 SCALE OF MAP 5,000 SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR U-COORDINATE LONGITUDE OR X-COORDINATE	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)
WOODS HOLE YELLOW STONE TOWER, 1928	P 411 M 120	NA 1927	41 31 33.071 70 39 43.352	1020.3 830.7 1005.1 386.0		192, 746. 53 829, 466. 56	
WOODS HOLE OCEANOGRAPHIC INSTITUTE DOME	411 120	"	41 31 28.18 70 40 19.31	869.4 981.6 447.7 943.4		192, 225 826, 736	
MCGARRAH, 1938	413 120	"	41 31 41.646 70 41 11.840	1284.8 566.2 274.5 1116.5			
ALLEN, 1938	413 120	"	41 30 43.856 70 40 54.566	1353.0 498.0 1265.4 126.0		187, 712. 66 824, 097. 49	
HADLEY, 1938	413 120	"	41 30 49.809 70 41 45.425	1536.7 314.3 1053.4 338.0			
BLACK BEACON 1938	413 121	"	41 31 06.752 70 41 02.765	208.3 1642.7 64.1 1327.2		190, 024. 10 823, 451. 55	
RED BEACON 1938	413 121	"	41 31 15.896 70 40 35.242	490.4 1360.6 817.1 574.1		190, 969. 73 825, 536. 36	
HOUSE WEATHER VANE, 1938	414 121	"	41 30 21.017 70 41 19.813	648.4 1202.6 459.5 932.0		185, 382. 68 822, 198. 67	
CHURCH OF MESSIAH STEEPLE	413 121	"	41 31 19.470 70 39 48.218	600.7 1250.3 1118.0 273.2		191, 366. 28 829, 109. 94	
NOBSKA POINT LIGHTHOUSE, 1904	406 237	"	41 30 56.883 70 39 20.291	1740.7 110.3 470.5 921.8		831,	
FISH COMMISSION CUPOLA; 1887	795 238	"	41 31 30.35 70 40 27.50	936.3 914.7 637.6 753.5		192, 438 826, 111	

1 FT. = 3048006 METER

COMPUTED BY:

DATE

CHECKED BY:

DATE

M. 2388.12

Pa 09 8

49. Notes for The Hydrographer:

- 001 SE cor wood pier
- 002 Pt of grass
- 003 pt of grass
- 004 westerly of two lone bushes on pt
- 005 NW chimney on hse
- 006 pt of grass
- 007 N end of fence
- 008 chimney, center bldg
- 009 center lone bush
- 010 cupola or chimney intersection gables
- 011 tip of grass
- 012 tip of grass
- 013 tip cleared light area
- 014 tip of land top of bluff
- 015 SE cor wood pier
- 016 E gable
- 017 tip of grass
- 018 rock
- 019 rock
- 020 SE cor rock bkhd
- 021 NE cor of pier - *SE corner crushed*
- 022 W cor white area
- 023 N tip of grass
- 024 NW cor pier
- 025 NW pt of brush
- 026 Tip of brush
- 027 center highest and most E cupola or chimney
- 028 Pt of brush
- 029 pt of brush
- 030 small dark bush on edge of grass
- 031 NE cor pier
- 032 NE cor fence around tennis court
- 033 pt on wall
- 034 Prominent rock ~~just above MHW~~
- 035 W cor conc patio
- 036 N chimney of 2
- 037 lone bush S of pt of brush
- 038 tip of brush on E side path
- 039 NE cor pier
- 040 pt of brush
- 0041 prominent bush
- 042 NE cor pier
- 043 SW cor pier
- 044 cor rock wall
- 045 cor wharf - *corner pile*
- 046 cor wharf
- 047 S cor of wharf
- 048 cor wall

- 049 end of pier
- 050 NE cor boathse
- 051 N cor wharf
- 052 cor rock wall
- 053 bush
- 054 W gable hse
- 055 S gable hse
- 056 bush
- 057 NW chimney on hse
- 058 bush
- 059 NW cor bldg
- 060 cor bldg
- 061 SW cor bldg
- 062 dark spot on beach
- 063 E cor CG wharf
- 064 SE cor stone pier
- 065 N cor conc wharf
- 066 SW cor pier
- 067 W bank drain at intersection rd fill?
- 068 SE cor square clearing ? ^{sw}
- 069 pt of bush
- 070 NW Corner of wood pier
- 071 Rock awash
- 072 Rock in cove
- 073 S end of wall
- 074 Point of ~~kush~~ brush
- 075 Center of rock on beach
- 076 Center of middle rock of three on beach *left rock?*
- 077* Center of rock just off point
- 078 Center of rock on beach
- 079 Center of rock awash

PHOTOGRAMMETRIC OFFICE REVIEW

T. 11336

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
7. Photo hydro stations
- ☒
8. Bench marks
- 7
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
- 7
16. Aids to navigation
- 7
17. Landmarks
- 7
18. Other alongshore physical features
- ☒
19. Other along-shore cultural features
- ☒

PHYSICAL FEATURES

20. Water features
- 7
21. Natural ground cover
- 7
22. Planetable contours
- 7
23. Stereoscopic instrument contours
- 7
24. Contours in general
- 7
25. Spot elevations
- 7
26. Other physical features
- 7

CULTURAL FEATURES

27. Roads
- 7
28. Buildings
- 7
29. Railroads
- 7
30. Other cultural features
- 7

BOUNDARIES

31. Boundary lines
- 7
32. Public land lines
- 7

MISCELLANEOUS

33. Geographic names
- 7
34. Junctions
- 7
35. Legibility of the manuscript
- ☒
36. Discrepancy overlay
- 7
37. Descriptive Report
- ☒
38. Field inspection photographs
- ☒
39. Forms
- ☒
- 40.
- 7

41. Remarks (see attached sheet)

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

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-11336

Shoreline Manuscript
March 1, 1955

61. General Statement:-

See copy of Instructions dated 11/20/53 attached to this report. It should be noted that the area embraced by T-11336 is part of the area covered by T-5744.

62. Comparison with Registered Topographic Surveys:

Comparison was made with T-5744, 1:10,000 scale, dated 1948. Some differences in location of the HWL are noted due to erosion of the sandy shoreline. The larger scale of T-11336 and better photographs made it possible to locate rocks in greater detail. The classification of rocks into (1) awash (2) bare at MHW by symbol on T-11336 is based on office study by stereo methods. The field inspection available did not provide sufficient rock data to make an accurate classification of rocks; however, the rocks that are shown can be positively identified in the 1953 photographs. T-11336 supplements T-5744 in common areas for use in the construction and revision of Nautical Charts.

63. Comparison with Maps of Other Agencies:

None made.

64. Comparison with Contemporary Hydrographic Surveys:

A thorough comparison was made with BOAT SHEET PAR 05154 (H-8170), scale 1:5,000, dated 1954. Differences are noted as follows: Foul area limit lines were deleted where they did not agree with those shown on the boat sheet. Low water lines were deleted where soundings on the boat sheet provided a more accurate location. Bridge at 41-30.5/70-41.9 noted as "washed out 8/21/54" on the boat sheet was not deleted. Pier at 41-30.6/70-40.6 noted "now missing" on boat sheet was not deleted.

One rock awash symbol was deleted at 41-30-46/^{42.37} 70-42-22 where the boat sheet indicates zero soundings and the photographs show no evidence of the rock. The boat sheet shows a rock (bare 5 $\frac{1}{2}$ feet) plotted about 1 $\frac{1}{2}$ mm SW of a rock awash symbol at (41-31-47/70-41-16.)²⁰⁷⁷ Topo held. The 1953 photographs show 2 rocks at this location but the two positions should not differ by more than 1/2 mm. Sounding records were not available to verify plotting of this rock. The descriptive report covering the hydrographic survey was not available during this review and there may be other discrepancies indicated in that

-2-

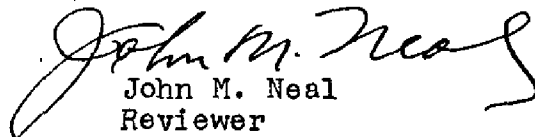
report. There is no conflict between soundings and the high water line as shown on T-11336.

65. Comparison with Nautical Charts:


Chart 348 WOODS HOLE 1:10,000, last correction date 5/31/54. T-11336 provides more detailed rock locations that can be used to outline and revise the symbolization of the foul areas shown on the chart. There are numerous differences in location of the high water line due to erosion of the sandy shoreline.


66. Adequacy of Results and Future Surveys:

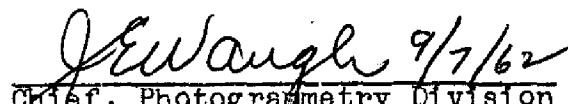
This manuscript complies with the instructions and is adequate for use as a base for hydrographic surveys and the revision of Nautical charts. ~~Accuracy complies with the National Standards.~~


John M. Neal
Reviewer

Approved:


Chief, Cartographic Section
Photogrammetry Division


Chief, Nautical Charts
Chart Division


Chief, Photogrammetry Division


Chief, Coastal Surveys Division

C O P Y

711-aal

Chief, Stereoscopic Mapping Branch

20 November 1953

Chief, Div. of Photogrammetry

Instructions for Compilation, Map No. T-5744, Woods Hole, Massachusetts

These instructions are for the preparation of a 1:5,000 scale shoreline map of Woods Hole Harbor, Massachusetts for use of the Ship PARKER in the spring of 1954. The map limits are shown on a section of Chart 249 filed with 73. 73 will prepare the projection on request.

The shoreline map will be compiled on the stereo-planigraph or Kelsh Plotter from existing low water photography.

The map will be limited to shoreline, offshore details visible on the photographs, and prominent objects inshore that may be useful to the hydrographer for signals.

Identification of control and shoreline inspection data must be taken from the records of planimetric map T-5744 since no shoreline inspection has been done on the recent photography. This shoreline map will be field edited during the progress of hydrography, and will be revised after the hydrography. The manuscript shall show photo-centers and pass points, and a set of office photographs shall be prepared for use of the hydrographer in locating additional photo-hydro stations.

Prominent objects inshore and well defined recoverable objects along the shore shall be located as photo-hydro stations and described in the report; spacing need not be closer than about every 1/8 mile along the shore. This map shall be scheduled for completion about 15 February.

O. S. Reading,
Chief, Div. of Photogrammetry

cc: 73

Location of Hydrographic Signals, Project 6116,
Woods Hole, Massachusetts

Models 55W2446, 55W2447 and 55W2448 were set on the stereoplanigraph to verify positions of office photo-hydro points and sextant hydrographic station positions.

All control was held within 0.2 mm with the exception of ALIEN 1938, which was not discernible on the available photography. Most office-selected photo-hydro points (black circles) held within 0.2 mm. The office positions which did not hold were replotted on map manuscript T-11336 with small blue circles. Sextant locations of hydrographic stations which could be positively identified were plotted on map manuscript T-11336 and office ratio prints No. 55W2447 and No. 55W2448 with red circles.

In those cases where the recovery of sextant-located hydrographic stations was not positive, the photo-images (or objects) identified as the hydrographic stations have been plotted on the map manuscript and office photographs with purple circles.

The original location of the front and rear ranges for the approach to Great Harbor has not changed since the hurricane of 31 August 1954. Two or three piers with minor horizontal displacements were re-compiled in red on the map manuscript.

Charles Shann

2-9-56

NAUTICAL CHARTS BRANCH

SURVEY NO.

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
6-3-55	348	M.C. Zunes	Before After Verification and Review
2- -57	348	D.H. Benson	Before After Verification and Review <i>Partly off -</i>
4-30-60	348	R.E. Elkins	Before After Verification and Review <i>Considered fully off after Rev of H-8170.</i>
5-5-60	249	R.E. Elkins	Before After Verification and Review <i>Considered fully applied after application of H-8170.</i>
5-9-60	1210	R.E. Elkins	Before After Verification and Review <i>Considered fully applied after application of H-8170.</i>
			Before After Verification and Review
			<i>See page 6 of this report</i> EGT
			Before After Verification and Review
			Before After Verification and Review
			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.

