

# 11174

Diag. Cht. No. 1208-2.

Form 504

U. S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

## DESCRIPTIVE REPORT

Type of Survey SHORELINE

Field No. PH 6116 Office No. T-11174

### LOCALITY

State MASSACHUSETTS

General locality MASSACHUSETTS BAY

Locality BURNET POINT

1951 - 1953

### CHIEF OF PARTY

E. H. Kirsch, Chief of Party

E. H. Kirsch, Baltimore District Office

### LIBRARY & ARCHIVES

DATE January 2, 1966

COMM-DC 61300

# 11174

# DATA RECORD

①

T-11174

Project No. (II): **Ph-116**

Quadrangle Name (IV):

Field Office (II): **Plymouth, Mass.**

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

Photogrammetric Office (III): **Baltimore, Maryland**

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

Instructions dated (II) (III): **30 April 1953**

Copy filed in Division of  
Photogrammetry (IV)

**9 June 1953 (Supplement 1)**

**9 July 1953 (Supplement 2)**

**11 July 1953 (Supplement 3)**

**10 July 1953 (Letter 70-1mh)**

**12 February 1954 (Office)**

Method of Compilation (III): **Graphic**

Manuscript Scale (III): **1:10,000**

Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): **1.000**

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): **NA 1927**

Vertical Datum (III): **MHW**

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): **QUARNET DATUM, 1940**

Lat.: **42° 00' 19.259" (594.2 m)**

Long.: **70° 35' 58.644" (1349.6m)**

Adjusted  
Unadjusted

Plane Coordinates (IV):

State: **Mass.**

Zone: **Mainland**

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.

(2)


SHORELINE

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

DATA RECORD

(3)

Field Inspection by (II): W. M. Reynolds

Date: Aug. 1953

Planetable contouring by (II):

Date:

Completion Surveys by (II):

Date:

Mean High Water Location (III) (State date and method of location):  
July 1953 - Field Inspection

Projection and Grids ruled by (IV): A. Riley

Date: 11/13/53

Projection and Grids checked by (IV): A. Riley

Date: 11/20/53

Control plotted by (III): J. King

Date: 2/26/54

Control checked by (III): L. A. Senasack

Date: 3/2/54

Radial Plot of Stereoscopic

Date: 3/15/54

~~Control extension by (IV):~~ F. M. Wisiecki

Planimetry

Date:

Stereoscopic Instrument compilation (III):

Contours

Date:

Manuscript delineated by (III): J. Phillips - J. Honick

Date: 6/15/55

Photogrammetric Office Review by (III): R. Glaser

Date: 7/14/55

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

Date:

Camera (kind or source) (II) **Production and Marketing Administration, single lens and C&GS single lens, camera "J".** (4)

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
DPT-2K-182 to 184	10/22/51	1250	1:10,000	4.6 above MLW
53-J-430 & 431	4/29/53	0707	1:10,000	1.8 " "
53-J-639 thru 642	4/29/53	1416	1:10,000	-0.1 (below MLW)

Tide (III)

From predicted tide tables

Reference Station: **Boston**  
 Subordinate Station: **Gurnet Point**  
 Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
	9.5	11.0
1.0	9.2	10.7

Washington Office Review by (IV): **S. G. Blankenbaker**

Date: **Nov. 1964**

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): **0.7**

Shoreline (More than 200 meters to opposite shore) (III): **5.8 mi.**

Shoreline (Less than 200 meters to opposite shore) (III): **0.8 mi.**

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II): **3** Recovered: **3** Identified: **2**

Number of BMs searched for (II): **0** Recovered: **0** Identified: **0**

Number of Recoverable Photo Stations established (III): **none**

Number of Temporary Photo Hydro Stations established (III): **none**

Remarks:

# SHORELINE MAPPING PROJECT PH-116

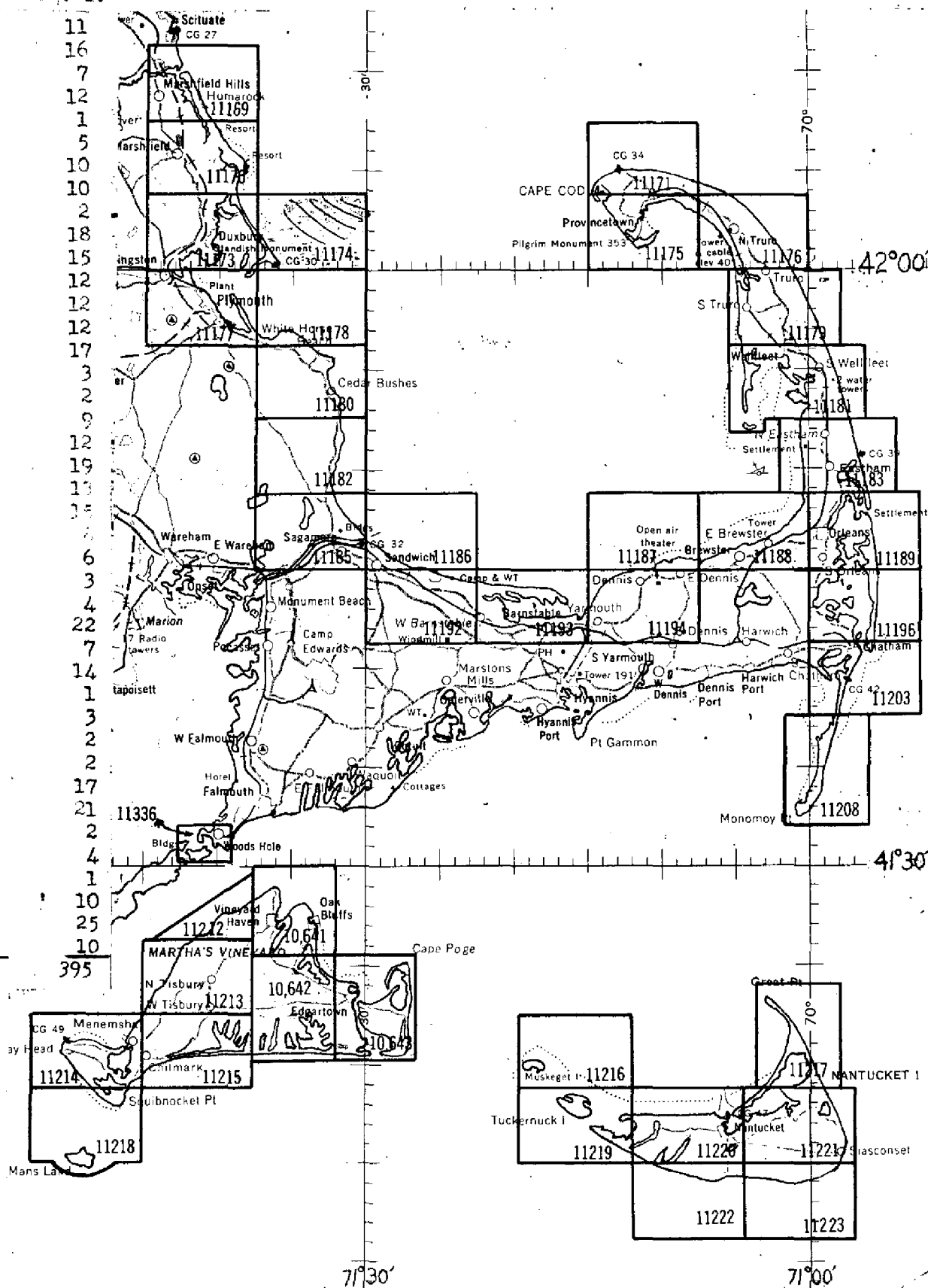
## CAPE COD, MASS.

(5)

Official Milage For Cost Accounts

Sheet Lin.Mi. Area  
Shoreline Sq.Mi.

11169	24	11
11170	12	16
11171	10	7
11172	26	12
11174	6	1
11175	18	5
11176	12	10
11177	14	10
11178	4	2
11179	15	18
11180	9	15
11181	31	12
11182	7	12
11183	23	12
11185	8	17
11186	6	3
11187	5	2
11188	13	9
11189	20	12
11192	5	19
11193	32	13
11194	7	15
11196	14	6
11203	24	6
11208	14	3
11212	12	4
11213	7	22
11214	22	7
11215	25	14
11216	5	1
11217	22	3
11218	9	2
11219	12	2
11220	24	17
11221	20	21
11222	6	2
11223	7	4
11336	7	1
10641	18	10
10642	12	25
10643	40	10
TOTALS	607	395



(6)

Summary to Accompany Descriptive Reports

T-11173 and T-11174

T-11173 and T-11174 are two of 40 similar surveys comprising project PH-116. Project coverage includes (1) Cape Cod Bay shoreline, (2) the entire east shore of Cape Cod, and (3) the islands of Marthas Vineyard and Nantucket. The subject maps cover Cape Cod Bay shoreline, north of Plymouth.

7. AREAL FIELD INSPECTION

This area is composed of the southeast end of Duxbury Beach and Gurnet Point.

Duxbury Beach is a narrow stretch of land separating Duxbury and Massachusetts Bays. All of the beach is sand with low scattered sand dunes, except for Gurnet Point, which is a rocky point with bluffs surrounding the point.

Photography was of recent date and of good quality. No difficulty was encountered in their interpretation in the field.

Field inspection is believed complete and was performed on the following single lens photographs: 53-J-430 and 53-J-431; 53-J-433 and 53-J-653.

3. HORIZONTAL CONTROL

All control was searched for and recovered.

A three point theodolite fix was made and identified opposite the center and approximately normal to the flight line of photographs 53-J-430 and 53-J-431.

No stations were reported lost.

4. VERTICAL CONTROL

Inapplicable.

5. CONTOURS AND DRAINAGE

Contouring is not applicable.

Drainage is tidal and is adequately covered by the photographs.

6. WOODLAND COVER

Inapplicable.

7. SHORELINE AND ALONGSHORE FEATURES

The mean high water line was located by measurements from identifiable points at approximately one-half mile interval.

The low water line is to be compiled by instrument methods in the Washington Office. The area was not visited at low water except as noted below, and no low water information has been indicated on the photographs. The area of Clarks Island was inspected; notes appear on photograph 53-J-653.

The foreshore varies widely. The beach along the eastern side of the sheet is steep and there is no appreciable difference between the mean high and mean low water lines. The beach along Saquish Neck is gradual and there is several hundred feet between the two lines.

The only bluffs are around Gurnet Point. These bluffs are approximately 50 feet high and should be emphasized on the map. The bluffs are plainly visible on the photographs and have not been indicated.

All docks, wharves, piers, etc. are adequately covered by the photographs.

There are no other shoreline structures.

8. OFFSHORE FEATURES

There are no offshore features within the limits of this map.

9. LANDMARKS AND AIDS

There are no landmarks for nautical charts.

One fixed aid to navigation, Plymouth (Gurnet) Light, was previously located by triangulation and has not been moved since location.

There are no aeronautical aids in the area.

10. BOUNDARIES, MONUMENTS AND LINES

Inapplicable.

11. OTHER CONTROL

None was established.

12. OTHER INTERIOR FEATURES

All roads and buildings are adequately covered by the photographs.

There are no bridges or cables over navigable waters.

There are no airports or landing fields.

The "turn" poles in the Coast Guard telephone line have been indicated on the photographs. The compiler is to draft in the telephone line as a straight line between these poles.

13. GEOGRAPHIC NAMES

No discrepancies in geographic names were noted during field inspection.

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA

Letter of Transmittal No. Ph-116-2, Forms 567, Landmarks and Aids to Navigation, to be forwarded to Washington Office at a later date.

Letter of Transmittal No. Ph-116-13, Low water photographs and other data, forwarded to Washington Office 11 September 1953.

Letter of Transmittal No. Ph-116-8, Data, Map T-11174, forwarded To Washington Office 11 September 1953.

Submitted  
8 September 1953

*William M. Reynolds*  
William M. Reynolds  
Cartographic Survey Aid

Approved & Forwarded  
11 September 1953

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

COAST AND GEODETIC SURVEY  
CONTROL RECORD

MAP T- 11174

PROJECT NO.

6116

SCALE OF MAP 1:10,000.....

SCALE FACTOR

[illegible]

1 FT. = .3048006 METER  
COMPUTED BY:.....

### B. Kurs

DATE \_\_\_\_\_

2/18/54

CHECKED BY: **L. A. Senasack**

DATE.

2/19/54

COMM-DC-57843

COMPILATION REPORT  
Project No. 6116  
Survey No. T-11174

The Photogrammetric Plot Report is part of the Descriptive Report for survey No. T-11173.

31. DELINEATION

Graphic methods were used to delineate this manuscript.

The vertical projector was used to compensate for scale difference between the photographs and the map manuscript.

32. CONTROL

Refer to Photogrammetric Plot Report.

33. SUPPLEMENTAL DATA

The U. S. G. S. Duxbury quadrangle was used for geographic names.

The revision data for the Duxbury quadrangle submitted by the field party was used for additional field inspection.

34. CONTOURS AND DRAINAGE

Contours: Inapplicable.

Drainage: No comment.

35. SHORELINE AND ALONGSHORE DETAILS

Shoreline inspection was adequate.

The mean low water line, foul areas and shallow areas were delineated from office interpretation of the photographs.

36. OFFSHORE DETAILS

Gurnet Rock and High Pine Ledge could not be delineated from the photographs.

37. LANDMARKS AND AIDS

Form 567 for one (1) Non-Floating Aid has been submitted.

38. CONTROL FOR FUTURE SURVEYS

No photo-hydro stations were located in the compilation office. Refer to the hydrographic survey data for photo-hydro stations located by the hydrographic party.

39. JUNCTIONS

Junction is in agreement with T-11173 to the west. Junction with T-11178 is an all water area. All water area lies to the north and east.

40. HORIZONTAL AND VERTICAL ACCURACY

No comment.

41 - 45

Inapplicable.

46. COMPARISON WITH EXISTING MAPS

Comparison has been made with U.S.G.S. Quadrangle, Duxbury, Mass., scale 1:31,680, edition of 1941, revised in 1947.

47. COMPARISON WITH NAUTICAL CHARTS

Comparison has been made with Chart No. 245, scale 1:20,000 published April 1932 (2nd Edition), corrected to 2/26/55.


Items to be applied to Nautical Charts immediately:

None.


Items to be carried forward:

None.

Respectfully submitted  
17 June 1955

  
Jack Honick  
Carto. Photo. Aid

Approved and forwarded

  
E. H. Kirsch  
Comdr. C&GS  
Baltimore District Office

## Review Report

T-11174

November 1964

62. Comparison with Registered Bureau Surveys

425	1853-54	1:10,000
3625	1916	1:20,000

No offshore rocks were located by the subject survey (T-11174). For Bureau charting purposes, rocks in the area are shown on H-8165 (1954-55). Some of the rock information on H-8165 was carried forward from T-3625 and its contemporary hydrography survey, no. 3906.

Except for the rock information shown on T-3625, the subject survey, T-11174, supersedes the prior survey and survey T-425 for charting purposes in the common area.

63. Comparison with Maps of Other Agencies

USGS Quadrangle, Duxbury	1:24,000 scale 1961
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No significant differences between the surveys were noted.

64. Comparison with Contemporary Hydrographic Surveys

H-8165	1854-55	1:10,000
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T-11174 provided the shoreline for H-8165. Except for rock information shown on H-8165 (Refer to heading 62) the surveys are in agreement.

65. Comparison with Nautical Charts

245	1:20,000	Revised 4-1-63
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T-11174 was applied to the chart in 1956. No changes effecting the chart were made during the final review of T-11174.

(14)

66. Adequacy of Results and Future Surveys

This map meets the National Standards of Map Accuracy and Bureau requirements.

Reviewed by:

S. G. Blankenbaker  
S. G. Blankenbaker

Approved by:

Charles Lewis  
Chief, Photogrammetric Branch  
for

Chief, Nautical Chart Division

W. H. Hughes 7/26/25  
Chief, Photogrammetry Division

7-15-55

Form 1-2

15

## PHOTOGRAMMETRIC OFFICE REVIEW

T. 11174

1. Projection and grids ☒ 2. Title ☒ 3. Manuscript numbers ☒ 4. Manuscript size ☒5a. Classification label ☒

## 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 <sup>Theod</sup> ~~sixant~~ 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. R. J. Glaser  
Reviewer

Joseph Steinberg  
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

48. GEOGRAPHIC NAMES LIST

Cape Cod Bay  
Coast Guard Station

Duxbury Bay  
Duxbury Beach

Gurnet Point

\* Gurnet Park *OK*

\* High Pine Ledge *OK*

Massachusetts Bay

Plum Hills  
Plymouth Bay

Saquish Neck

*Names approved  
5-15-65  
A. J. Wrought*

\*Feature not delineated. Name in pencil on manuscript.

## NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED  
TO BE DELIVERED

**STRIKE OUT ONE**

Plymouth, Mass.

23 October, 1953

I recommend that the following objects which have ~~(*hazgxyyt*)~~ been inspected from seaward to determine their value as landmarks be charted on ~~(*deletetkfrom*)~~ the charts indicated.

The positions given have been checked after listing by Isaiah V. Fitzgerald

Lorin F. Woodcock  
*Chief of Party.*

[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 individual field survey sheets. Information under each column heading should be given.

### RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. T-11174

## INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

[illegible]