

# 13099

Diag. Cht. No. 1207-2.

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

## DESCRIPTIVE REPORT

Type of Survey Shoreline

Field No. \_\_\_\_\_ Office No. T-13099

### LOCALITY

State Massachusetts

General locality Green Harbor - Brant Rock

Locality Green Harbor River

1966-67

### CHIEF OF PARTY

V. Ralph Sobieralski Wash.,  
Chief, Photogrammetry Division D. C.

### LIBRARY & ARCHIVES

DATE April 24, 1968

COMM-DC 51300

# 13099

①

FORM C&GS-181a  
(3-66)

U.S. DEPARTMENT OF COMMERCE  
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION  
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD  
T - 13099

PROJECT NO. (II):  PH - 6707		
FIELD OFFICE (II): Norfolk, Va. (Green Harbor, Mass.)		CHIEF OF PARTY J.C. Bull (J. Wilson)
PHOTOGRAMMETRIC OFFICE (III): Washington, D. C.		OFFICER-IN-CHARGE V. Ralph Sobieralski
INSTRUCTIONS DATED (II) (III): October 4, 1966 - Field November 2, 1966 - Office		
METHOD OF COMPILATION (III): B-8 Stereoplotter		
HORIZONTAL SCALE (III): 1:5,000		STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):
DATE RECEIVED IN WASHINGTON OFFICE (IV):		DATE REPORTED TO NAUTICAL CHART BRANCH (IV):
APPLIED TO CHART NO.	DATE:	DATE REGISTERED (IV):
GEOGRAPHIC DATUM (III): N.A. 1927		VERTICAL DATUM (III): <b>MHW *</b> <del>MEAN SEA LEVEL EXCEPT AS FOLLOWS:</del> 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 <b>* See note on map concerning rocks &amp; wash</b>
REFERENCE STATION (III): BRANT ROCK SEAWALL DATUM 1940		
LAT.: 42°05'28.181"	LONG.: 70°38'34.962"	<input checked="" type="checkbox"/> ADJUSTED <input type="checkbox"/> UNADJUSTED
PLANE COORDINATES (IV): 398,782.0 x = 832,599.03		STATE Mass.  ZONE Mainland
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.		



## DESCRIPTIVE REPORT - DATA RECORD

FIELD INSPECTION BY (III): E. W. Hartford		* Field Edit by: E. W. Hartford <i>See below</i>	DATE: October 1966 * July 1967
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):  From tide controlled infra red photography taken Sept. 17, 1966			
PROJECTION AND GRIDS RULED BY (IV): A. E. Roundtree			DATE 11 - 21 - 66
PROJECTION AND GRIDS CHECKED BY (IV): R. Glaser			DATE 11-22-66
CONTROL PLOTTED BY (III): M. Webber			DATE 2-24-67
CONTROL CHECKED BY (III): R. A. Youngblood			DATE 2-24-67
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III): R. Kelly			DATE 2-15-67
STEREOSCOPIC INSTRUMENT COMPILATION (III): R. A. Youngblood		PLANIMETRY	DATE 3-17-67
		<del>CONTOURS</del>	DATE
MANUSCRIPT DELINEATED BY (III): R. A. Youngblood			DATE 3-24-67
SCRIBING BY (III):			DATE
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): J. P. Battley, Jr.			DATE Jan. 1968
REMARKS:  F.E. APPLIED AUG. 1967			

## DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):

Wild RC 5

## PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
66 W(C) 1370 thru 1374	9-17-66	17:34	1:15,000	0.6' above MLW
66 W 3430R thru 3433R	9-17-66	14:05	1:15,000	0.9 above MHW

## TIDE (III)

	RATIO OF RANGES	MEAN RANGE	SPRING RANGE
REFERENCE STATION: Boston, Gurnet Point		9.2	
COORDINATE STATION:			
SUBORDINATE STATION:			

WASHINGTON OFFICE REVIEW BY (IV): J. P. Battley, Jr.

DATE:  
Jan. 1968

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):

RECOVERED:

IDENTIFIED:

NUMBER OF BM(S) SEARCHED FOR (II):

RECOVERED:

IDENTIFIED

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):

REMARKS:



(4)

SUMMARY TO ACCOMPANY DESCRIPTIVE REPORT

T-13099

Job PH-6707

January 1968

T-13099 is a 1:5,000 scale shoreline survey compiled to provide a new manuscript for hydrographic surveys and to be used as a base for an inset to be included on 1:80,000 scale chart 1207.

The area covered is the Green Harbor River and the coastline of Massachusetts Bay from Brant Rock to just south of Green Harbor River entrance.

Hydrographic surveys had been planned for the spring of 1967, but were delayed and as of the date of this report have not been rescheduled.

Field inspection, encompassing the recovery and identification of horizontal control, the location of landmarks and the identification of shoreline features, was completed in October 1966.

A photogrammetric bridge was achieved in February 1967 utilizing the C-8 stereoplanigraph.

The compilation of the manuscript was completed in the Washington Office in March 1967.

Field edit of the compiled features was accomplished July 17 and 27, 1967, and the few additions or corrections applied to the manuscript in August 1967.

A comparison print was prepared and submitted to the Marine Chart Division to point out rock discrepancies realized by the new survey (see the Review Report, Item 65).

A copy of the manuscript will be registered in the Bureau Archives under T-13099.

Submitted by:

*Jeter P. Battley, Jr.*

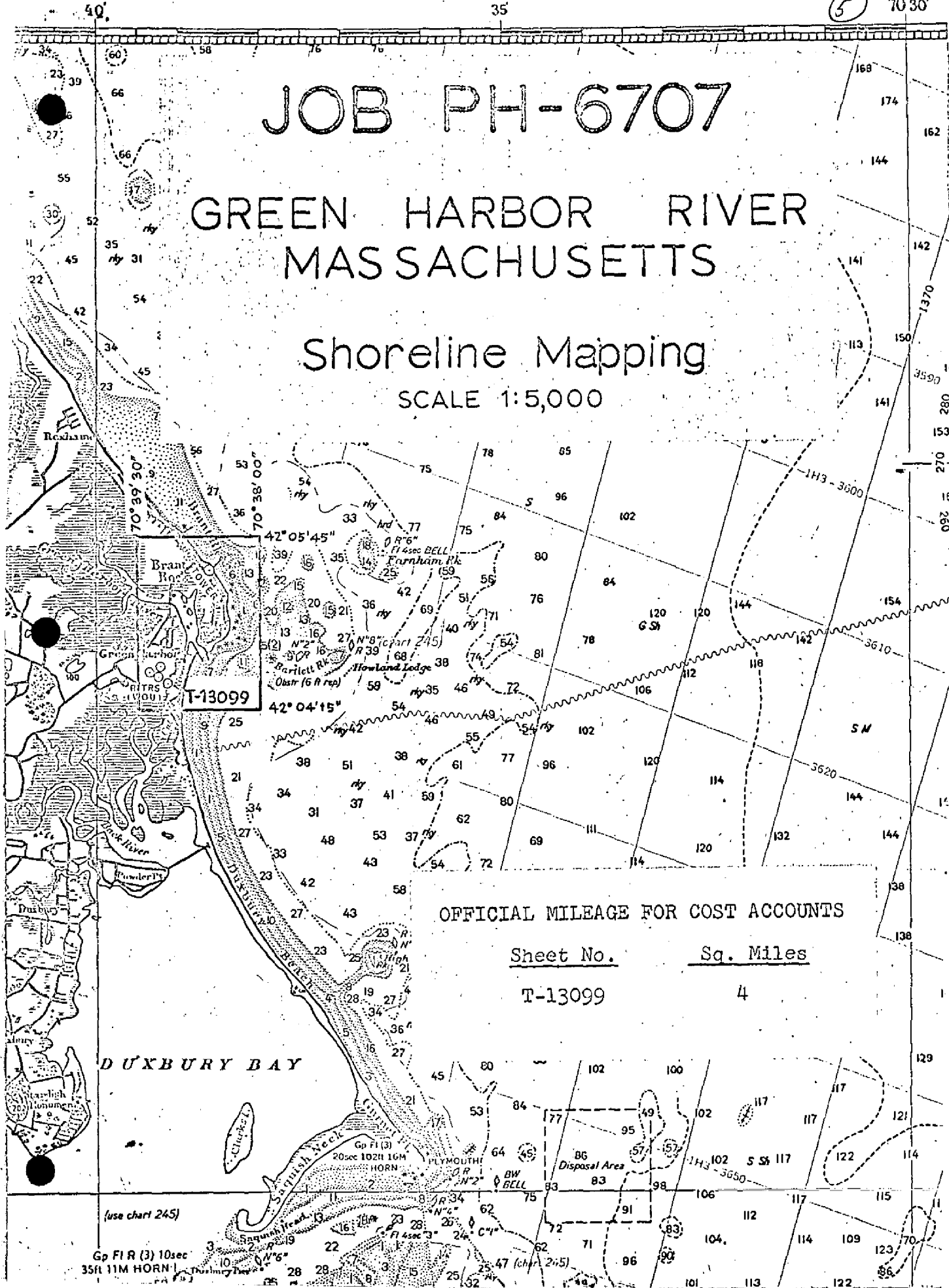
Jeter P. Battley, Jr.

JOB PH-6707

GREEN HARBOR RIVER  
MASSACHUSETTS

Shoreline Mapping

SCALE 1:5,000



OFFICIAL MILEAGE FOR COST ACCOUNTS

Sheet No.

Sq. Miles

T-13099

4

DUXBURY BAY

(use chart 245)

Gp Fl R (3) 10sec  
35ft 11M HORN

Gp Fl (3) 10sec  
102ft 10M HORN



C-143  
(6) 3 L

FIELD INSPECTION REPORT  
T-13099  
PH-6707  
GREEN HARBOR RIVER, MASS.

This report is submitted for one map T-13099. Field work was completed October 26, 1966, and was performed in accordance with Instructions dated October 4, 1966.

AREAL FIELD INSPECTION

The area is the immediate vicinity of Brant Rock and Green Harbor, and is a summer resort which is served by State Highway 139.

The photographic quality was good for inland features, but just fair for alongshore features.

Photographs used for field inspection are listed below:

66-W-3571	color
" " 3572	"
" " 3573	"

HORIZONTAL CONTROL

Horizontal control recovery and identification has been completed in accordance with project instructions.

VERTICAL CONTROL

There was no vertical control recovered.

CONTOURS AND DRAINAGE

Contours are inapplicable. Drainage is entirely composed of tidal streams.

WOODLAND COVER

Woodland cover was classified in accordance with the Topographic Manual.

SHORELINE AND ALONGSHORE FEATURES

The high water line is to be delineated from infrared photography. All other shoreline features are covered by field inspection notes on the photographs. All rocks are shown on Photograph 66-W-3572 color print. There are numerous rocks in this area, and are about all above the low water line.

LANDMARKS AND AIDS

Four nautical landmarks have been recommended for charting. Form 567 is submitted for each.

There are no fixed aids in the area covered by map T-13099.

OTHER CONTROL

One Three Point Fix was taken near station 29 V MGS.

INTERIOR FEATURES

All roads were classified in accordance with Photogrammetric Instructions No. 56.

There are no Swamps in this area.

The marsh limits are to be delineated from infrared photography.

All field Data sent to Rockville, Maryland on 10-26-66.

Submitted by:

26 October 1966

E. W. Hartford

Chief, sub-unit, Photo Party 62

*E. W. Hartford*



(8)

PHOTOGRAMMETRIC PLOT REPORT  
JOB PH-6707  
GREEN HARBOR RIVER, MASSACHUSETTS

February 15, 1967

21. Area Covered

The report covers T-sheet 13099 of Green Harbor River, Massachusetts.

22. Method

A horizontal bridge was run to provide control for graphic and B-8 compilation. The C-8 was used for the instrumentation. Photographs 66-W(C)-1370 thru 1374 were used in bridging. The adjustment on the IBM 1620 utilized four control stations with two stations used as checks.

23. Adequacy of Control

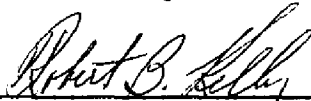
The horizontal control provided complied with the project instructions and was adequate except for BRANT ROCK WIRELESS POLE. The adjustment indicated a shift in the position of this station. Reference is made to USC&GS, Descriptions of Triangulation Stations Book 514, page 10, that BRANT ROCK WIRELESS POLE should not have been used and should be deleted from the triangulation records.

All other stations held well within the accuracy required by National Standards of Map Accuracy at 1:5,000 scale.

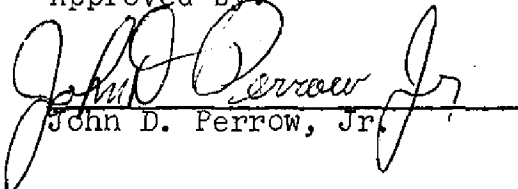
25. Photography


Contact prints were adequate as to coverage, overlap and definition. Diapositives were found to be very grainy.

Submitted by:

  
Robert B. Kelly

Approved by:


  
John D. Perrow, Jr.

29 K (MGS)  66 W C 3570

AEROTRIANGULATION SKETCH  
GREEN HARBOR RIVER MASS.  
PH 6707  
FEBRUARY, 1967

(9)


70°39'30"  
42°05'45"

BRANT (USE), 1935 


BRANT ROCK, BLACK CHURCH SPIRE, 1909

BRANT ROCK SEAWALL DATUM, 1940

29 Q (MGS) 

29 T (MGS) 

42°04'15"  
70°38'00"

 THREE POINT FIX

66 W C 3574



SCALE FACTOR

1 FT. = 3048006 METER

COMPUTED BY:

DATE \_\_\_\_\_

CHECKED BY:

DATE:

(11)

COMPILATION REPORT  
PROJECT PH-6707  
T-13099  
APRIL 1967

31. Delineation

This manuscript was compiled, at a scale of 1:5000, on the B-8 stereoplotter, utilizing 1966 color photography (scale 1:15,000). This photography was taken when the tide was .6' above MLW and afforded an interpretation of foreshore rocks. The shoreline was delineated from tide controlled infrared photographs taken at MHW.

Points were dropped along the shoreline to facilitate hydrographic signal location and cronapaque ratio prints of the color photography were resected to the manuscript and prepared in the usual manner for photo-hydro support. The 3 time ratio of the color photography was printed in black and white.

This manuscript was also delineated to the limits of the survey according to Marine Chart specifications to provide a new base manuscript for Chart 1207.

32. Control

Bridge points furnished by Aerotriangulation were sufficient to adequately compile the manuscript and to locate pass points for photo-hydro support.

33. Supplemental Data

None

34. Contours and Drainage

Inapplicable

35. Shoreline and Alongshore Details

No unusual problems were encountered in compiling the MHWL.

36. Offshore Details

There are numerous rocks in the area. They were delineated as visible on the photography and in accordance with field inspection.



37. Landmarks and Aids

All landmarks recommended by the field inspector were located in the photogrammetric bridge. There are no fixed aids in the area.

38. Control for Future Surveys

None

39. Junctions

There are no junctions in this project.

40. Horizontal and Vertical Accuracy

See bridging report.

41. - 45.

Inapplicable

46. Comparison with Existing Maps

A comparison was made with USGS quadrangle, Duxbury, Mass., scale 1:24,000, 1961.

47. Comparison with Nautical Charts

A comparison was made with Chart 1207, scale 1:80,000, 6th Edition, March 1966 and Chart 245, scale 1:20,000, 4th Edition, November 1964.

Approved by

*K. N. Maki*

K. N. Maki

Chief, Compilation Section

Submitted by

*Rose A. Youngblood*

Rose A. Youngblood

## PHOTOGRAMMETRIC OFFICE REVIEW

T- 13009 13099

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. ✓ see note in Review Report	15. BRIDGES
16. AIDS TO NAVIGATION None	17. LANDMARKS ✓	18. OTHER ALONGSHORE PHYSICAL FEATURES ✓	19. OTHER ALONGSHORE 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 No field name check		34. JUNCTIONS	35. LEGIBILITY OF THE MANUSCRIPT ✓
36. DISCREPANCY OVERLAY ✓	37. DESCRIPTIVE REPORT ✓	38. FIELD INSPECTION PHOTOGRAPHS ✓	39. FORMS
40. REVIEWER Peter P. Battley Jr		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 Jacqueline B. Phillips		SUPERVISOR K. N. Mahi	
43. REMARKS			

(14)

FIELD EDIT REPORT  
Special Project AMC-7-67 Green Harbor  
T-13099  
PH-6707

GENERAL NOTES

This report is submitted in accordance with instructions dated 20 June 1967, and is for one map field edited the 17 and 27 of July 1967.

51 METHODS

Field edit was accomplished by two methods, by truck and skiff travel.

Additions, and corrections are noted on the discrepancy print in violet ink and referenced to the photograph 66 W 3571 and 3572

52 ADEQUACY OF COMPIATION

The delineation of rocks and other features of the map looked very good, the compilers interpretation of the photographs was good.

54 RECOMMENDATIONS

None

56 ROCKS

Sextant fixes were taken on two sunken rocks to verify location, also to locate a rock just south of the sunken rocks at the end of a rocky area, these fixes are plotted on the discrepancy print along with the angles.

The rocks delineated just east of Bluefish Point could have been lobster pot buoys.

57 SHOALS

One shoal off Green Harbor Point is recommended to be developed by Hydro, this is a very large shoal with a rocky bottom and covers at MHW from 1 foot to about 10 feet.

58 LANDMARKS

All landmarks were visually checked and verified, there are no additions or deletions.

31 July 1967  
submitted by

cc: Rasure  
Wilson

E.W. Hartford



REVIEW REPORT T-13009<sup>13099</sup>  
Shoreline Survey  
January 1968

61. General Statement

See summary in Preface.

62. Comparison with Registered Topographic Surveys

Comparison was made with T-11170. T-11170 was compiled in October 1955 from 1952 photography, supplemented by field inspection in July 1953. The survey was reviewed in June 1964 by the Washington Office, Review Section, and listed as superseding prior surveys for nautical charting.

T-13009<sup>13099</sup> supersedes survey T-11170 for nautical charting.

63. Comparison with Maps of Other Agencies

USGS quadrangle, Duxbury, Mass.; 1:24,000 scale; dated 1961.

No significant differences, other than new shoreline structures, were noted.

64. Comparison with Contemporary Hydrographic Surveys

New hydrography at 1:5,000 scale is planned for the area of this survey, but at present, the manuscript was compared with H-8164, 1:10,000 scale, dated 1954-55. The shoreline on this hydrographic survey originated with T-11170. H-8164 had rock data that was not shown on T-11170. The 1964 Review Report for T-11170 noted this and indicated that color photography and additional field inspection would be required to map and check the rock information. The 1966 field inspection and 1966 color photography revealed many more rocks than those previously charted or evident on H-8164. One shoal area off Green Harbor Pt. was particularly recommended for development by hydrographic surveys in the field edit report.

65. Comparison with Nautical Charts

Chart No. 245, 5th Edition, May 8, 1967, 1:20,000 scale. A comparison was made with the above listed chart and a comparison print prepared. There are two bare rocks off



Green Harbor Pt. which are not shown on the published chart, along with numerous field inspected rocks awash. The elevations of the two bare rocks as shown on T-13099 were determined in the field. In addition, Bluefish Pt. is shown as Blue Fish Pt. on the chart. The Geographic Names Section verified that one-word spelling, "Bluefish", is correct.

#### 66. Adequacy of Results and Future Surveys

This map complies with the project instructions and the National Standards of Accuracy. The many rocks awash shown were visible on the color photography, indicated by field inspection and verified by field edit. The 1:5,000 scale of the survey afforded a more detailed delineation of rocks in the area. The shoal area mentioned in the Field Edit Report should be developed by new hydrography.

Reviewed by:

Jeter P. Battley, Jr.  
Jeter P. Battley, Jr.

Approved by:

Charles H. Hensen  
Chief, Photogrammetric Branch

J. Ralph Sobersalski APR 15 1968  
Chief, Photogrammetry Division

J. P. Boyer  
Chief, Marine Chart Division

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-6707 (Green Harbor, Mass.)

T-13099

- Bluefish Point
- Brant Rock (rock)
- Brant Rock (town)
- Green Harbor
- Green Harbor Point
- Green Harbor River
- Massachusetts Bay
- Cut River - *J.F.*

Approved by:

*A. Joseph Wraight*

A. Joseph Wraight  
Chief, Geographer

Prepared by:

*Frank W. Pickett*

Frank W. Pickett  
Cartographic Technician

## NONFLOATING AIDS OR LANDMARKS FOR CHARTS

**STRIKE OUT TWO**

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

The positions given have been checked after listing by

J. P. Battley, Jr.

V. Ralph Sobiernalski

Chief of Party.

STATE Massachusetts, Green Harbor

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-55, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. 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.

## # TABULATE SECONDS AND METERS



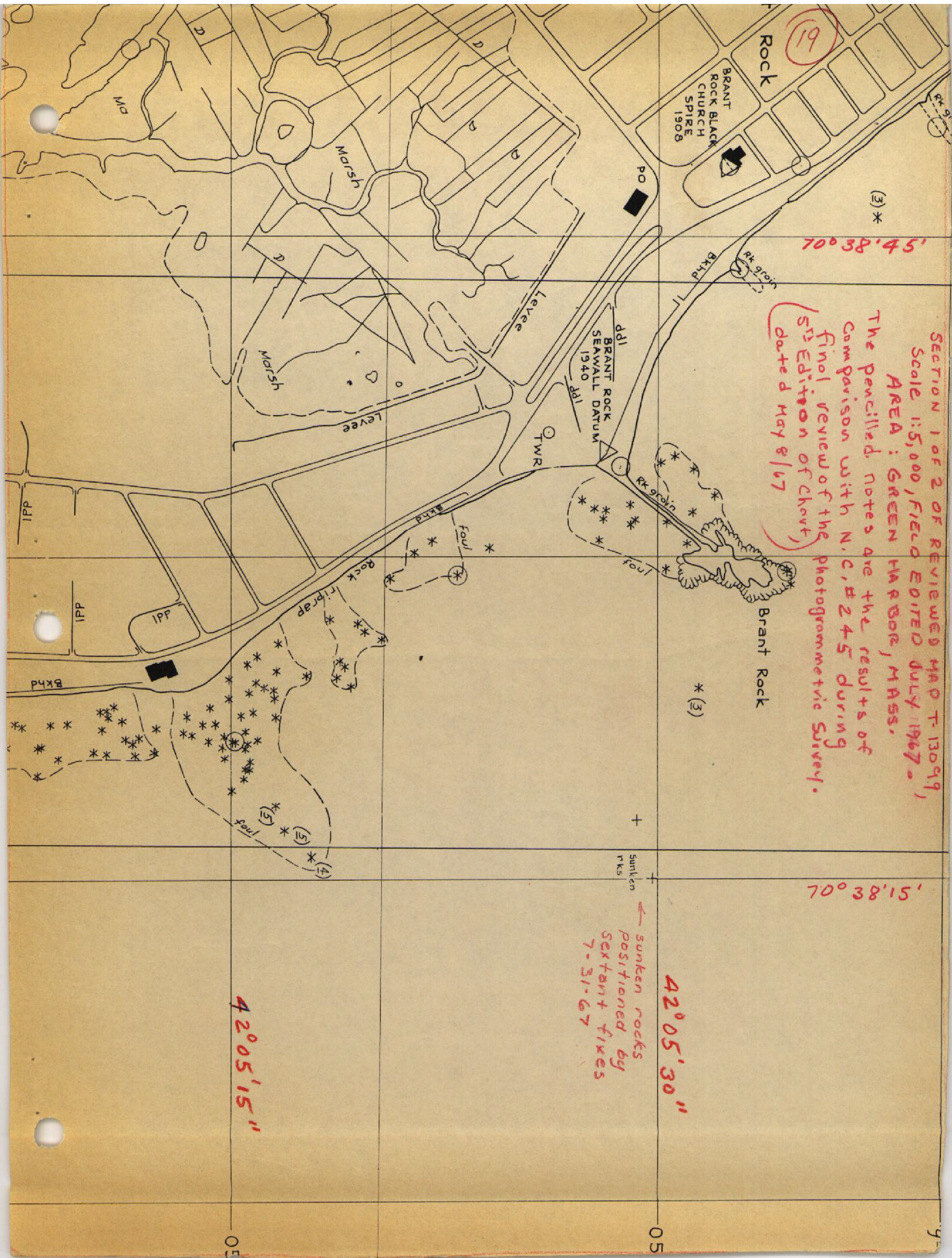
70° 38' 45'

 $70^{\circ}38'15''$ 

sunken rocks  
positioned by  
Sextant fixes  
7-31-67

42° 05' 30"

42°05'15"





20

Harbor

Boat ramp  
Floating piers

Great charted  
piling as sub  
imagined of time  
Wiggle of fire

Chart no  
Tide gauge  
Field inspection  
600 35 22

Concr bkhd  
Rk groin  
Rk groin

Bluefish Pt

Marsh  
Spoil  
Marsh

Trailer  
Park

Barricade

Green Harbor Pt

bare rock not  
shown on Chart 245  
(field inspection)

as per Geographic Names Section  
this name is correct - it is shown as "Blue Fish  
Pt" on Chart 245

(Groins are partially awash  
at MLW - dash line indicates  
extent of groins)

Section 20 of 2 of REVIEWED MAP  
T-13099  
(See page 1 of for additional  
data)

bare rock is  
not shown on Chart 245  
(field inspection)

Y  
A  
B

04'

05'

S  
A  
T  
E  
N  
H



