

11219a
11219b

Diag. Cht. No. 1209-2.

Form 504	
U. S. DEPARTMENT OF COMMERCE	
COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey <u>Planimetric</u>	
Field No. <u>Ph-116</u>	Office No. <u>T-11219a</u> <u>T-11219b</u>
LOCALITY	
State <u>Massachusetts</u>	
General locality <u>Nantucket Sound</u>	
Locality <u>Tuckernuck Island to Nantucket</u> <u>Island</u>	
<u>1955-61</u>	
CHIEF OF PARTY	
<u>E.H.Kirsch, Chief of Party</u>	
<u>W.E.Randall, Chief of Party</u>	
<u>L.W.Swanson, Div. of Photo. Wash., D.C.</u>	
LIBRARY & ARCHIVES	
DATE <u>February 1, 1965</u>	

USCOMM-DC 5087

11219a
11219b

DATA RECORD

(f)

T - 11219 A (PH-116)
T - 11219 B (PH-116 and PH-6102)

Project No. (II): 27190 (6116) Quadrangle Name (IV): E. H. Kirsch
PH-116 (Refer to Descriptive Report "Summary".)

Field Office (II): Baltimore, Md. Chief of Party: L. W. Swanson

Photogrammetric Office (III): Washington, D. C. Officer-in-Charge: W. E. Randall
Baltimore Md. T-11219A
T-11219B

Instructions dated (II) (III):
30 April 1953
9 July 1953 (Supp. II)
15 Dec. 1955
20 Jan. 1956
Copy filed in Division of
Photogrammetry (IV)
Office Files

supplemental instructions (office) PH-116 8 May 1961
PH 6102 instructions 10 May 1961

Method of Compilation (III): Stereoplanigraph (T-11219A)
Graphic (T-11219B)

Manuscript Scale (III): 1:10,000 Stereoscopic Plotting Instrument Scale (III): 1:10,000

Scale Factor (III): 1.0

Date received in Washington Office (IV): AUG 30 1956 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):

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): Smith Point 2, 1955

Lat.: Long.: Adjusted
Field Unadjusted

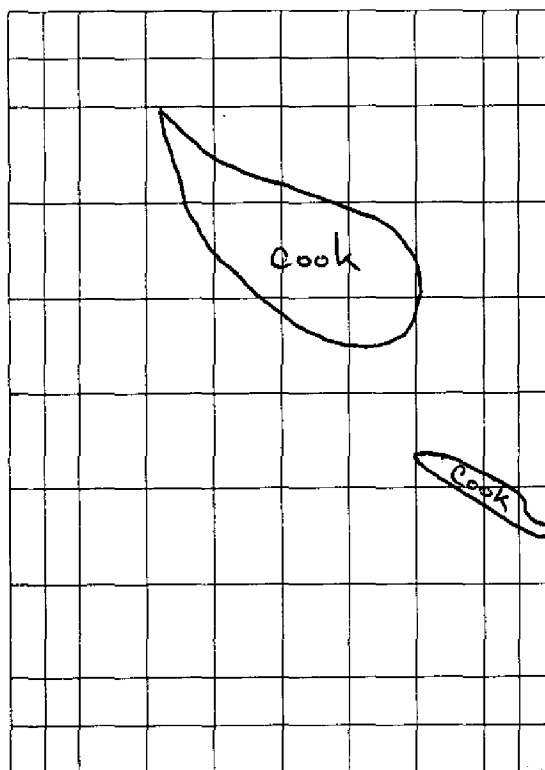
Plane Coordinates (IV): State: Massachusetts Zone: Island Zone

Y= 103,002.96 ft. X= 273,574.48 ft.

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.

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detailed
Areas ~~covered~~ by various personnel
(Show name within area)
(II) (III)

DATA RECORD

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Field Inspection by (II): R. L. McGlinchey (T-11219A) Date: July 1955

Planetable contouring by (II): None Date:

Completion Surveys by (II): R. L. McGlinchey (T-11219A) Date: July 1955

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

Field Inspection July 1955 (T-11219A)
1961 "tide controlled" infrared photography (T-11219B)

Projection and Grids ruled by (IV): A. Riley Date: April 1956

Projection and Grids checked by (IV): A. Riley Date: April 1956

Control plotted by (III): C. Cook Date: June 1956

Control checked by (III): J. Perrow Date: June 1956

Radial Plot or Stereoscopic Date:

Control extension by (III): None

Planimetry C. Cook

Date: June 1956

Stereoscopic Instrument compilation (III):

Contours

Date:

Manuscript delineated by (III): J. McDonald (T-11219A) Date: July 1956
Shoreline revision: L. A. Senasock (T-11219B) June 1961

Photogrammetric Office Review by (III):

C. E. Cook (T-11219A)

Date: July 1956
June 1961

Revision Review: R. Glaser (T-11219B)

Elevations on Manuscript

checked by (II) (III): None

Date: --

Camera (kind or source) (III): Wild Aviogon

(4)

Number	Date	Time	Scale	Stage of Tide
55-W-5043 through 5046	15 March 1955	1000 to 1002	25,000	+0.2 ft.
OBSERVED TIDE				
COLOR				
61-S-6611 & 6613	4-12-61	3:25	1:20,000	-0.1 (low water)
61-S-6615, 6616	4-12-61	3:27	1:20,000	-0.1 (low water)
INFRARED				
61-S-1559, 1560	4-12-61	7:43	1:10,000	-0.1 (high water)

Tide (III)

Reference Station: Boston
Subordinate Station: Tuckernuck Island, East Pond
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
	9.5	11.0
0.27	2.6	3.1

Washington Office Review by (IV): S.G. Blankenbaker (T-11219A and T-11219B) Date: July, 1964

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): 17

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

Shoreline (Less than 200 meters to opposite shore) (III): } 24 *

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II):

Number of BMs searched for (II):

Number of Recoverable Photo Stations established (III):

Number of Temporary Photo Hydro Stations established (III):

Recovered: Identified:
Recovered: Identified:

See T-11221, Descriptive Report,
for data covering Nantucket Island area.

Remarks:

* Shoreline revised: 11.2 miles

Refer to the Descriptive Report for Nautical Chart 265 (T-12500)
for new forms 567 covering Nantucket Island

SHORELINE MAPPING PROJECT 6116

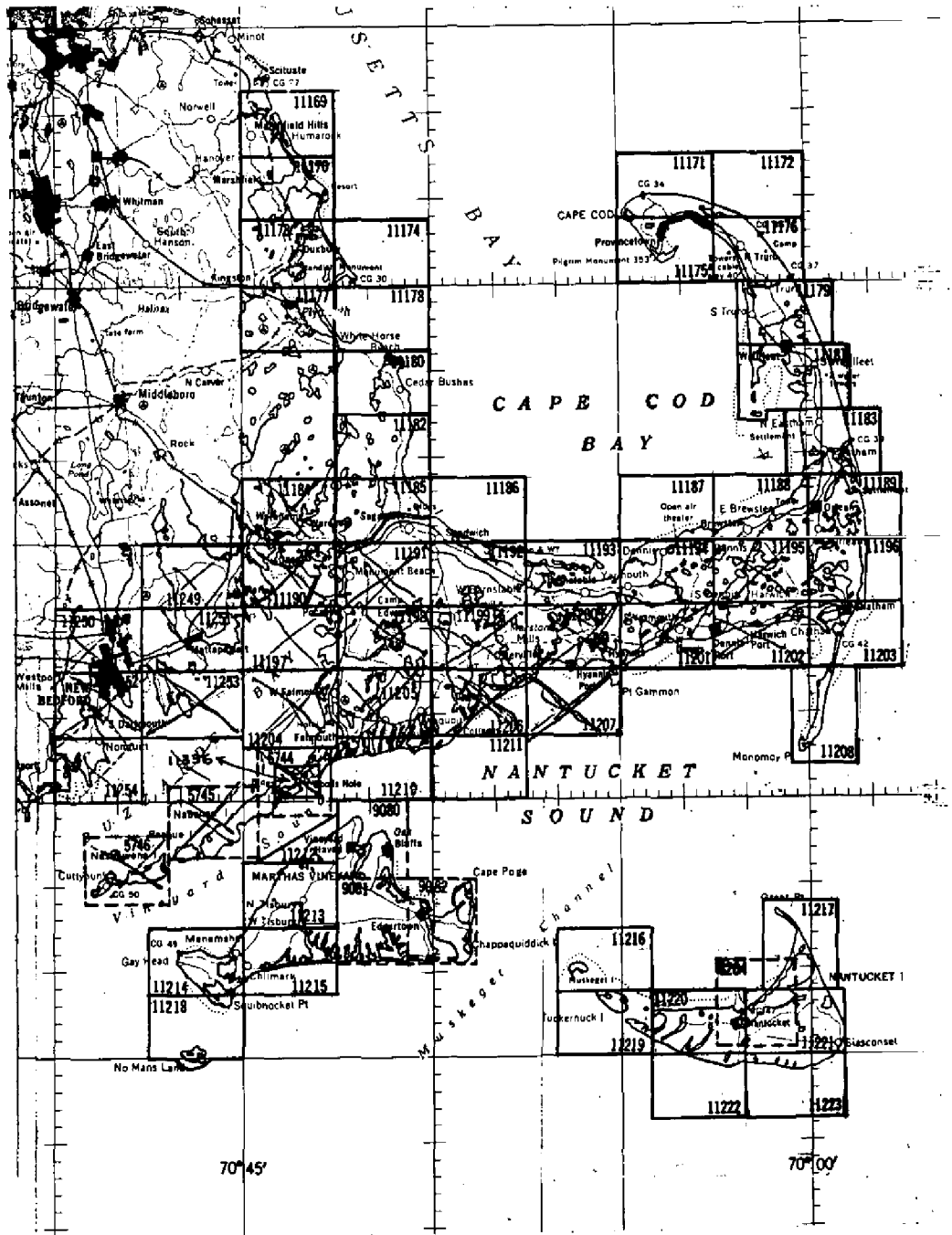
CAPE COD, MASS.

(5)

TOTAL MILEAGE FOR COST ACCOUNTS

No.	Lin.	Miles Shoreline	Sq. St. Miles
11169	24	11	
11170	12	16	
11171	10	7	
11172	2	1	
11173	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	
11184	12	13	
11185	8	17	
11186	6	3	
11187	5	2	
11188	13	9	
11189	20	12	
11190	59	12	
11191	17	13	
11192	5	19	
11193	32	13	
11194	7	15	
11195	3	16	
11196	14	8	
11197	19	4	
11198	7	7	
11199	9	9	
11200	25	10	
11201	13	12	
11202	13	9	
11203	24	6	
11204	12	5	
11205	9	15	
11206	20	14	
11207	6	2	
11208	14	3	
11210	25	6	
11211	3	1	
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	
11249	7	24	
11250	11	23	
11251	19	21	
11252	15	13	
11253	13	1	
11254	16	3	
11336	7	1	

TOTALS 872 584



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Summary to Accompany Descriptive Reports

T-11219A and T-11219B

T-11220A and T-11220B

T-11219 (A and B) and T-11220 (A and B) are of two of 40 similar surveys comprising project PH-116. Two maps (labeled "A" and "B") are to be registered for each of the subject surveys. Project coverage includes (1) Cape Cod Bay shoreline, (2) the entire east shore of Cape Cod, including Monomoy Point, and (3) the islands of Marthas Vineyard and Nantucket.

The shoreline on T-11219A and T-11220A was compiled from 1955 photographs (field inspected in 1955). This shoreline was used for Hydrographic Survey 8497 (1959).

New photography - tide controlled infra red and color - was taken in 1961 for the purpose of constructing a new nautical chart (265) of Nantucket Island. A chart compilation manuscript registered as T-12500, provided the new topography for the chart. The details required for the chart were revised on copies of T-11219A, T-11220A and other Ph-116 maps. T-11219B and T-11220B are the revised copies of the maps.

A report of the 1959 photogrammetric work accomplished in conjunction with Hydrographic Survey 8497 is found in the Descriptive Report for T-11219 (A and B).

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T-11219 A

FIELD REPORT -

See Descriptive Report T-11221

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MAP T-----11219
MAP T-----11219
PROJECT NO-----6116
SCALE OF MAP-----1/10,000
SCALE FACTOR-----

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SCALE FACTOR

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

PROJECT NO. 6316

MAP T-11219...

STATION

DATUM

LATITUDE OR y -COORDINATE
LONGITUDE OR x -COORDINATE

DISTANCE FROM GRID IN FEET.
OR PROJECTION LINE IN METERS

N.A. 1927 - DATUM
DISTANCE
FROM GRID OR PROJECTION L
IN METERS
FORWARD (BACK

GRID OR PROJECTION LINE	IN METERS	FACTOR DISTANCE	RWARD (BACK)
1	10	10	10
2	20	20	20
3	30	30	30
4	40	40	40
5	50	50	50
6	60	60	60
7	70	70	70
8	80	80	80
9	90	90	90
10	100	100	100
11	110	110	110
12	120	120	120
13	130	130	130
14	140	140	140
15	150	150	150
16	160	160	160
17	170	170	170
18	180	180	180
19	190	190	190
20	200	200	200
21	210	210	210
22	220	220	220
23	230	230	230
24	240	240	240
25	250	250	250
26	260	260	260
27	270	270	270
28	280	280	280
29	290	290	290
30	300	300	300
31	310	310	310
32	320	320	320
33	330	330	330
34	340	340	340
35	350	350	350
36	360	360	360
37	370	370	370
38	380	380	380
39	390	390	390
40	400	400	400
41	410	410	410
42	420	420	420
43	430	430	430
44	440	440	440
45	450	450	450
46	460	460	460
47	470	470	470
48	480	480	480
49	490	490	490
50	500	500	500
51	510	510	510
52	520	520	520
53	530	530	530
54	540	540	540
55	550	550	550
56	560	560	560
57	570	570	570
58	580	580	580
59	590	590	590
60	600	600	600
61	610	610	610
62	620	620	620
63	630	630	630
64	640	640	640
65	650	650	650
66	660	660	660
67	670	670	670
68	680	680	680
69	690	690	690
70	700	700	700
71	710	710	710
72	720	720	720
73	730	730	730
74	740	740	740
75	750	750	750
76	760	760	760
77	770	770	770
78	780	780	780
79	790	790	790
80	800	800	800
81	810	810	810
82	820	820	820
83	830	830	830
84	840	840	840
85	850	850	850
86	860	860	860
87	870	870	870
88	880	880	880
89	890	890	890
90	900	900	900
91	910	910	910
92	920	920	920
93	930	930	930
94	940	940	940
95	950	950	950
96	960	960	960
97	970	970	970

SMITH POINT 2, 1955	Field Plane Coord.
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SS SMITH
POINT 2, 1955

TUCKERNUCK,
1887

SS TUCKERNUCK,
1887

1 FT. = 3048006 METER
Printed
COMPUTED BY:

2050

DATE June 1056

CHECKED BY: T. Perrow

DATE, June 1956

M-2388-12

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COMPILATION REPORT
T-11219A

31. DELINEATION:

The stereoplanigraph was used to detail this sheet. Despite large water areas, no difficulty was experienced in clearing models because of considerable underwater detail. The tip of the sand spit to the northwest of Tuckernuck Island was sketched from photography and checked in a projector because it was beyond the limits of the model and the adjoining model could not be set. The high water line of the sand area off Smith Point was put in by plane table.

32. CONTROL:

Not applicable.

33. SUPPLEMENTAL DATA:

Not applicable.

34. CONTOURS AND DRAINAGE:

Contours not applicable. Drainage on this sheet was confined to drains in marsh areas.

35. SHORELINE OF ALONGSHORE DETAILS:

Only distinct limits of shoal and shallow areas were indicated on the manuscript. Breaker areas were generalized. These were delineated from office photographs.

36. OFFSHORE DETAILS:

Not applicable.

37. LANDMARKS AND AIDS:

Not applicable.

38. CONTROL FOR FUTURE SURVEYS:

No Forms 524 were submitted for recoverable topographic stations.

39. JUNCTIONS:

Junctions were made with T-11216 on the north and T-11220 on the east.

40. HORIZONTAL AND VERTICAL ACCURACY:

No comment.

46. COMPARISON WITH EXISTING MAPS:

USGS
Tuckernuck Island Quad
1/31680, 1951

47. COMPARISON WITH NAUTICAL CHARTS:

Nautical Chart No. 1209
Nantucket Sound and Approaches
1:80,000 1943, corr. to 8/30/54

- (b) "Items to be Applied to Nautical Charts Immediately:" None
- (c) "Items to be Carried Forward:" None
- (d) See field report (with T-11221) for information on changing sand areas.

C. E. Cook

Submitted by: C. E. Cook

Approved:

K. N. Maki
K. N. Maki
Supervisory Photogrammetric
Engineer

Morton Keller
Morton Keller
Supervisory Cartographer

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SUPPLEMENTAL COMPILATION REPORT

T-11219 B

The approximate low-water line, breaker areas and the apparent edge of shallow areas were delineated by office interpretation on overlays from the 1:20,000 scale color photographs. These details were then transferred to the manuscript by use of the vertical projector.

Ratio prints of the infrared photography were used to revise the high-water line by holding to details common to the manuscript and the photographs.

Respectfully submitted
22 June 1961

R. Glaser

R. Glaser
Carto. (Photo.)

Approved and forwarded

William E. Randall

William E. Randall
CDR, C&GS
Baltimore District Officer

Addendum:

Only those interior details needed for the compilation of Chart 265 have been added or revised from 1961 photography.

Review Reports

T-11219A and T-11219B

T-11220A and T-11220B

61. General

Refer to the subject Descriptive Report "Summaries" concerning the registration of two maps each for surveys T-11219 and T-11220.

62. Comparison with Registered Topographic Surveys

T-11220 supersedes T-8204, scale 1:10,000, date 1948, for charting purposes in the common area. Having been used for (1) shoreline for hydrographic survey No. 8497 (maps T-11219A and T-11220A), and (2) new nautical chart construction (maps T-11299B and T-11220B), the maps were not compared with older topographic surveys at the time of final review. Manuscripts T-11219B and T-11220B or chart compilation manuscript T-12500 should be used for future chart construction.

63. Comparison with Maps of Other Agencies

Quadrangle Tuckernuck Island, scale 1:24,000, date 1951
 Quadrangle Nantucket, scale 1:24,000, date 1951.

No significant differences were noted.

64. Comparison with Contemporary Hydrographic Surveys

8497 Scale 1:10,000 Date 1958-59

A portion of T-11219A shoreline shown on H-8497 was relocated by planetable method. The revised shoreline was not applied to T-11219A.

The inaccurately located rock (on map T-11219A) referred to in the Photogrammetric Report of hydro support activities (bound with the subject Descriptive Report) was removed from T-11219A during final review. The rock was relocated on T-11219B.

The differences in mapped shoreline between the planimetric surveys (T-11219B and T-11220B) and the hydrographic survey (8497) reflect shoreline changes that occurred after 1959- the time of the hydrographic survey.

65. Comparison with Nautical Charts

265 Scale 1:40,000 Date 1963

Topography for this chart was provided through T-11219B, T-11220B and other FH-116 surveys; refer to the Descriptive Report "Summary: and other sections of this report.

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 L. Lauer
Chief, Photogrammetry Division
kel

Chief, Nautical Chart Division

J. E. Waugh 1/26/65
Chief, Photogrammetric Branch

T-11219.

Geographic Names.

15

- ✓ Atlantic Ocean
- ✓ Broad Creek
- ✓ Dry Shoal (not shown on USGS quad. but it is on current chart 1209,
- ✓ East Pond unnamed)
- ✓ Eel Point (if any part of it is actually on this map)
- ✓ Maddaket Harbor (not Maddekot)
- ✓ Massachusetts.
- ✓ Nantucket Island
- ✓ Nantucket Sound
- ✓ Narrow Creek
- ✓ North Pond
- ✓ Smith Point
- ✓ Smith Point Road
- ✓ Tuckermuck Bank
- ✓ Tuckermuck Island

Names approved 7-5-56

L. Heck.

L.H.

File with
Desc paper →

T-EE.
T-11219
T-11220

(16)

11
~~11~~
75

PHOTOGRAMMETRIC REPORT

(PH-116)

PROJECT CS-369, VICINITY OF NANTUCKET ISLAND AND MARTHA'S VINEYARD

1959 FIELD SEASON

USC&GS SHIP GILBERT, LCDR. H. W. KEITH, JR., COMDG.

PHOTOGRAMMETRIC REPORT

PROJECT CS-369, VICINITY OF NANTUCKET ISLAND AND MARTHA'S VINEYARD

1959 FIELD SEASON

USC&GS SHIP GILBERT, LCDR. H. W. KEITH, JR., COMDG.

PURPOSE AND SCOPE:

The purpose of this report is to briefly outline the photogrammetric work which was accomplished during the 1959 Field Season in compliance with Revised Instructions, Project CS-369 dated 21 October 1957.

PHOTO-HYDRO CONTROL:

Some photo-hydro stations were located by the photogrammetric party in 1955, but these were insufficient in number to control the hydrography. Additional control, comprising about 90% of all hydrographic control used during the 1959 Field Season, was established by the hydrographic party using photogrammetric methods.

SHORELINE AND TOPOGRAPHIC DETAILS:

Field-edit of the shoreline and alongshore features was accomplished as follows: Beginning at the east limit of manuscript T-11220 on the north shore of Nantucket Island and moving in a westerly direction around to photo-hydro station Cupola, 1955 (Lat. 41 16.2'N, Long. 70 12.3'W) on the south shore, including all Nantucket Island shoreline on manuscript T-11219. About 2½ nautical miles of shoreline in the vicinity of Smith Point was revised using planetable methods (See Topographic Title Sheet, Sheet GI-A-59, a copy of which is appended to this report). A rock off the east shore of Tuckernuck Island in the vicinity of Lat. 41 17.8'N, Long. 70 14.4'W was found to be inaccurately located and was re-located by photogrammetric methods and checked sextant fix. Five class 1 buildings, constructed subsequent to field inspection, were located by sextant fix.

PHOTOGRAMMETRIC MATERIAL USED:

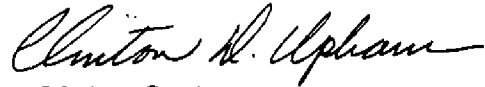
Manuscripts: T-11219, T-11220

Photographs: 55W5037 thru 55W5039
55W5043 thru 55W5049

TABULATION OF APPLICABLE DATA:

<u>DATA</u>	<u>DATE FORWARDED</u>
Manuscript T-11219, paper print *	1/11/60
Manuscript T-11220, paper print *	1/11/60
Planetable Sheet GI-A-59	1/11/60
* Field-Edit Sheet	

Respectfully submitted,



Clinton D. Upham
LT., C&GS
Comdg., Ship GILBERT

FORM 537a (9-24-47)		DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY	
TOPOGRAPHIC TITLE SHEET		REGISTER NO. T - 19	
Each Planetable and Graphic Control Sheet should be accompanied by this form, completed so far as practicable, when forwarded to the Washington Office.			
STATE Massachusetts			
GENERAL LOCALITY Nantucket Island			
LOCALITY Smith Point			
SCALE 1:10,000		DATE OF SURVEY 8 October , 19 59	
VESSEL GILBERT			
CHIEF OF PARTY LCDR. Hubert W. Keith, Jr.			
SURVEYED BY LT. C. D. Upham, Ens. Robert M. Davidson			
INKED BY Ens. Robert M. Davidson			
HEIGHTS IN FEET ABOVE MHW OR _____ ☐ TO GROUND ☐ TO TOPS OF TREES			
CONTOUR _____ APPROXIMATE CONTOUR _____ FORM LINE INTERVAL _____ FEET			
PROJECT NUMBER CS-369			
REMARKS The shoreline was re-located by planetable traverse. The traverse originated at triangulation station SMITH POINT 2, 1955 and closed on photo-hydro station Red. The position of hydrographic signal Sit, also located by planetable traverse, was checked by three point sextant fix. The sextant fix agreed precisely with the traverse position of this point. In addition to SMITH POINT 2, 1955 and Red, the following control was used; <u>Triangulation Stations:</u> SMITH, MGS, 1931 NANTUCKET ISLAND WEST CONSOLAN TOWER, 1956 <u>Photo-Hydro Stations:</u> Yet Pop Cov Ten			

