

Washington

8711

Nds

8711  
1128

Form 504
U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE
DESCRIPTIVE REPORT
Type of Survey <u>TOPOGRAPHIC</u>
Field No. <u>T-8711 N/s</u> Office No. _____
LOCALITY
State <u>NORTH CAROLINA</u>
General locality <u>DARE COUNTY</u>
Locality <u>PEA ISLAND</u>
<u>1947</u>
CHIEF OF PARTY
Lt. Comdr. Riley Sipe (Field)
Lt. Comdr. George E. Morris, Jr.
LIBRARY & ARCHIVES
DATE _____

## DATA RECORD

T-8711

Quadrangle (II): T-8711

Project No. (II): Ph-5(45)

Field Office: Morehead City, N.C. Chief of Party: Riley J. Sipe  
Lieut. Comdr.

Compilation Office: Tampa, Fla. Chief of Party: George E. Morris, Jr.  
Lieut. Comdr.

Instructions dated (II III): Undated

OFFICE FILES  
Copy filed in Descriptive  
~~Report No. T-~~ (VI)  
OF THE DIVISION OF PHOTOGRAMMETRY

Completed survey received in office: Aug. 25, 1947

Reported to Nautical Chart Section: Sept. 1, 1947

Reviewed: Oct. 1948 Applied to chart No. Date:

Redrafting Completed:

Registered: Prelim. Nov. 10, 1948 Published:  
Final

Compilation Scale: 1:10,000 Published Scale: 1:24,000

Scale Factor (III): None

Geographic Datum (III): N.A. 1927 Datum Plane (III): M.S.L.

Reference Station (III): Pea Island, 1874

Lat.:  $35^{\circ} 42' 37.512$  (1156.1m) Long.:  $75^{\circ} 30' 41.372$  (1040.0m) Adjusted  
~~Unadjusted~~

State Plane Coordinates (VI):

X =

Y =

Military Grid Zone (VI)

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
16049	6 April '46	1305	1:10,000	<del>2.2</del> 1.2
16050	"	"	"	<del>2.2</del>
16051	"	"	"	<del>2.2</del>
16052	"	"	"	<del>2.2</del>
16053	"	"	"	<del>2.2</del> 1.2

Tide from (III): Oregon Inlet

Mean Range: 1.8

Spring Range: 2.2

Camera: (Kind or source) U.S. C. & G. S. 9-lens 8 $\frac{1}{4}$ " focal length

Field Inspection by: B.O. Bryant and S.J. Hathorn  
 date: Nov. 1946  
 Dec. 1946

Field Edit by: J. K. Wilson  
 date: June 1948

Date of Mean High-Water Line Location (III): December 1946

Projection and Grids ruled by (III) T.L.J. Washington  
 date: 10 Mar. 1947

" " " checked by: " "  
 date: 10 Mar. 1947

Control plotted by: E. C. Andrews  
 date: June 1947

Control checked by: W.H. Shearouse  
 date: " 1947

Radial Plot by: M.M. Slavney  
 date: 26 June 1947

Detailed by: R. Dossett  
 date: July, 1947

Reviewed in compilation office by: J. A. Giles  
 date: August, 1947

Map Manuscript  
 Elevations on ~~Field Edit Sheet~~  
 checked by: J. A. Giles  
 date: August, 1947

STATISTICS (III)

Land Area (Sq. Statute Miles): 6.5 (appx.)

Shoreline (More than 200 meters to opposite shore): 27.5

Shoreline (Less than 200 meters to opposite shore): 5.5

Number of Recoverable Topographic Stations established: 8

Number of Temporary Hydrographic Stations located by radial plot: None

Leveling (to control contours) - miles: None

Roman numerals indicate whether the item is to be entered by, (II) Field Party, (III) Compilation Party, or, (VI) the Washington Office.

When entering names of personnel on this record give the surname and initials (not initials only).

Remarks:



MAP T- 8711

PROJECT NO. PH 5 (45)

SCALE OF MAP 1:10,000

SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR $\mu$ -COORDINATE LONGITUDE OR $x$ -COORDINATE		DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS		DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS		FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
Pea Island / 1874	Pub. 218 pp. 15	N.A. 1927	35° 42'	37.512				1156.1 (693.1)		
Pipe Station / C-2	C.E. 522	"	75° 30'	41.372				1040.0 (468.3)		
Pipe Station A-1	C.E. 523	"	35 41	19.853				611.9 (1237.3)		
Pipe Station A-2	C.E. 524	"	75 29	01.224				30.8 (1477.9)		
Sub-Station A-1	Pos. Comp.	"	35 42	53.812				1658.5 (190.7)		
Sub-Station C-2	"	"	75 29	38.168				959.4 (548.8)		
Pipe Station A-2	C.E. 524	"	35 43	06.832				210.6 (1683.6)		
Sub-Station A-1	Pos. Comp.	"	75 29	41.385				1040.2 (467.9)		
Sub-Station C-2	"	"	35 42	29.061				895.7 (953.5)		
Sub-Station B-1	"	"	75 29	26.751				672.5 (835.8)		
Pea Island, C.G. 1933	"	"	35 41	46.378				1429.4 (419.8)		
Pipe Station B-2	C.E. 517	"	75 29	12.511				314.6 (1193.9)		
New, B-6	C.E. 518	"	35 44	48.626				1498.6 (350.6)		
West Base B-4	C.E. 520	"	75 30	28.622				719.2 (788.4)		
Pipe Station C-1	C.E. 521	"	35 41	01.01				31.1 (1818.1)		
			75 28	51.91				1305.3 (203.4)		
			35 37	37.593				1158.6 (690.6)		
			75 28	19.283				485.2 (1024.6)		
			35 39	16.953				522.5 (1326.7)		
			75 28	54.467				1370.1 (139.2)		
			35 39	47.934				1477.3 (371.9)		
			75 28	54.343				1366.9 (142.3)		
			35 41	02.317				71.4 (1777.8)		
			75 29	04.444				111.7 (1397.0)		

1 FT. = 3048006 METER  
COMPUTED BY: W. H. Shearouse

DATE 18 March 1947

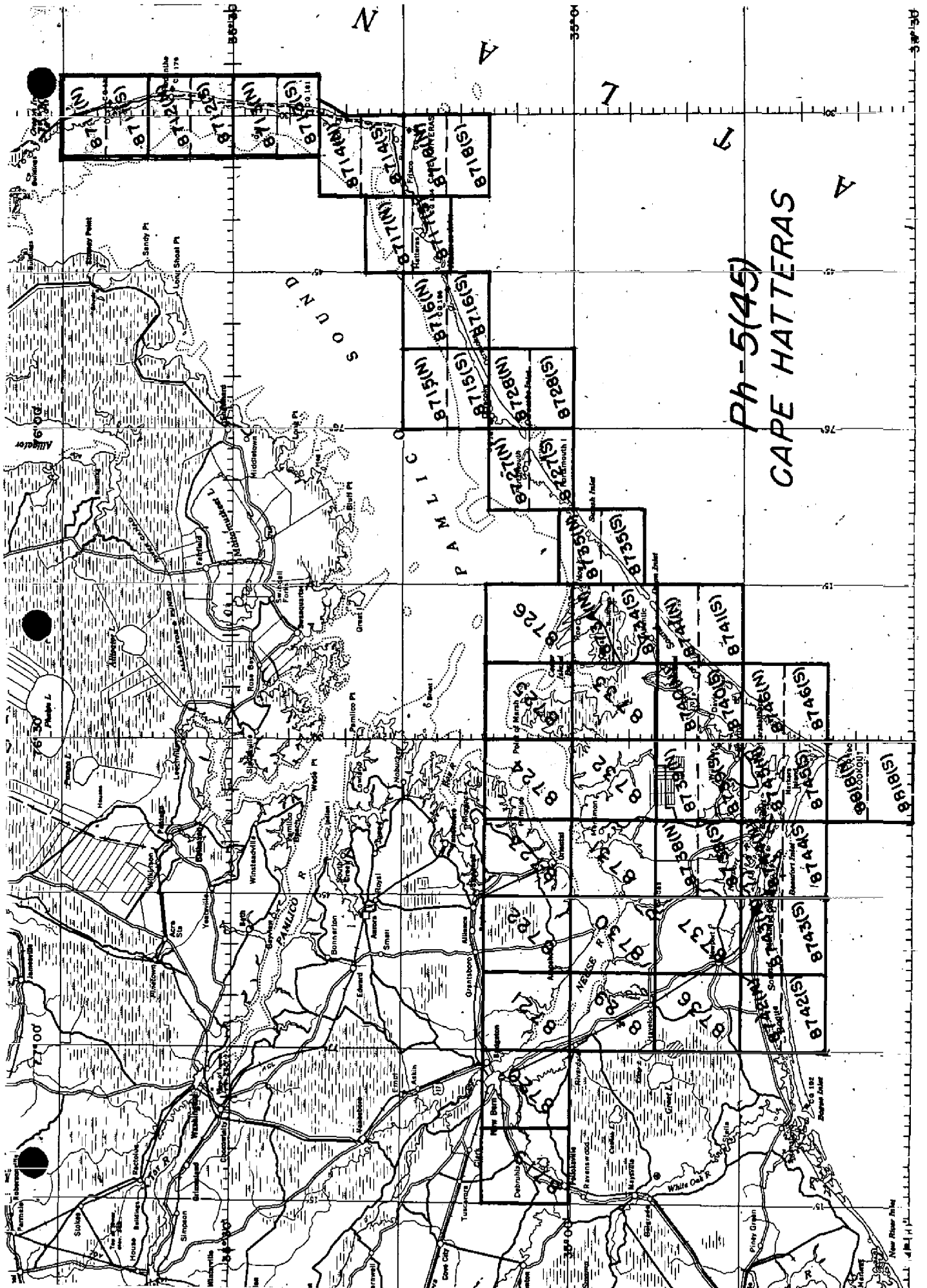
CHECKED BY: R. Cossett

DATE

26 March, 1947

M-2388-12

[illegible]



Ph-5(45)  
CAPE HATTERAS

Statement to Accompany Descriptive Report  
T8711

1. T8711 is composed of two complete topographic map manuscripts as follows:

T8711 1/2 scale 1/10,000

T8711 3/2 scale 1/10,000

2. The several mapping operations were:

(a) 9-lens aerial photography and laboratory processing, 1/10,000 scale.

(b) The field survey included identification of shoreline, identification of horizontal and vertical control, clarification of photographic details, geographic names and boundary investigations.

(c) Compilation by graphic methods and fitting the Geological Survey contours to the map details.

(d) Preliminary office inspection.

(e) Field Edit.

(f) Final review of both map manuscripts to insure completeness and conformance with specifications, and to include corrections in accordance with the field edit survey of T8711 N and S.

(g) Processing

Composite 1:20,000 scale blue line reductions are being prepared for smooth drafting. There will not be a 1:20,000 scale manuscript.

3. T8711 and the adjoining quadrangles will be published and distributed by the Geological Survey, in accordance with an agreement of March 25, 1947.

4. Data pertaining to T8711 will be filed and may be obtained as follows:

(a) Filed in the Division of Photogrammetry

(1) T8711 N and S, scale 1:10,000, map manuscripts, field edit and final review corrections applied. (No field edit sheet was prepared by the field edit party; work was done on photos and discrepancy prints.)

(b) Filed in Coast and Geodetic Survey Archives

(1) Descriptive Report T8711.

- (2) 1:10,000 scale, cloth mounted photo print of manuscript, T8111 7/2
- (3) 1:10,000 scale, cloth mounted photo print of map manuscript T8111 7/2
- (4) The above prints are to be permanently registered under one number, T8111, and when T8111 is published a cloth backed copy of the published map will also be registered.

date Oct. 14, 1948

Harland R. Cravat  
Harland R. Cravat  
Cartographer, Photogrammetrist

FIELD INSPECTION REPORT:  
T 8711 - (35° 37.5 / 75° <sup>26.5</sup>~~30.0~~)  
T 8712 - (35° 30.0 / 75° ~~30.0~~)  
T 8713 - (35° 22.5 / 75° ~~30.0~~)  
Project Ph-5 (45)  
Sub-project A  
Riley J. Sipe, Chief of Party

All phases of the field work were done in accordance with the Director's Instructions, Project Ph-5 (45), Field; and supplement 1 to the above, dated 11 December 1946, except for deviations noted herein.

The field work on these quadrangles was accomplished by the following personnel:

Quad 8711

<u>NAME &amp; TITLE</u>	<u>FIELDWORK</u>	<u>DATES</u>
S. J. Hathorn Photogrammetrist	Horizontal Control Recovery Vertical Control Recovery	26 Nov - 3 Dec 1946
B. O. Bryant Photo Aid	Shoreline Inspection Interior Inspection	27 Nov - 6 Dec 1946

Quad 8712

S. J. Hathorn Photogrammetrist	Horizontal Control Recovery	4 Dec - 12 Dec 1946
B. O. Bryant Photo Aid	Shoreline Inspection Contours Interior Inspection Vertical Control Recovery	6 Dec - 20 Dec 1946

Quad 8713

S. J. Hathorn Photogrammetrist	Horizontal Control Recovery	10 Dec - 23 Dec 1946
I. Y. Fitzgerald Photo Aid	Shoreline Inspection	11 Dec 1946 - 8 Jan- 1947
B. O. Bryant Photo Aid	Contours Vertical Control Recovery	11 Dec 1946 - 16 Dec 1946
I. Y. Fitzgerald Photo Aid	Shoreline Inspection Interior Inspection	16 Dec 1946 - 7 Jan- 1947

1. Description of the Area:

The land area embraced by these quadrangles is a narrow barrier beach, sometimes referred to as the outer banks, located between Pamlico Sound and the Atlantic Ocean, and is the easternmost land area along the North Carolina Coast. Almost the entire area is composed of sand dunes and flats, which supports scattered patches of grass. Pamlico Sound has deposited enough mud on the western edge to support some marsh, varying from a narrow fringe to approximately one half mile in width.

2. Completeness of Field Inspection:

It is believed that the field inspection is complete and adequate.

3. Interpretation of the Photographs:

As the photographs are of a recent date no great difficulty was encountered in the interpretation of the photographs.

4. Horizontal Control:

In accordance with the instructions each photograph was fixed along the flight line by a specially located control station along a line through the photograph center approximately normal to the line of flight.

5. Vertical Control:

This work consisted of Bench Mark recovery only.

Only three Bench Marks of the Coast & Geodetic Survey fall within the limits of these Quadrangles. They are Tidal Bench Marks located at Rodanthe. Two of these were recovered, and one is considered lost.

A layout of a Base Line Traverse showing Bench Marks established by the U. S. Department of Interior, National Park Service, every one half mile<sup>and</sup> at point of intersections, was furnished by the U.S.C. & G.S. Washington Office. Adjustments to elevations of these Bench Marks were also made by the Washington Office. These Bench Marks were searched for, and descriptions written for those recovered. A sufficient number were recovered to control the contouring; therefore no supplemental leveling was necessary.

6. Contours and Drainage:

Two thirds of the area covered by these Quadrangles was previously contoured at five foot intervals: Re: Supplemental In-

structions dated 11 Dec 1946. The Contouring of the remaining one third between Lat.  $35^{\circ} 25'$  and  $35^{\circ} 32.5'$  was begun 5 Dec 1946 and completed 16 Dec 1946. The contour interval was five feet; and the work was done directly on nine lens photographs Nos. 16057, 16073, 16058, 16059, 16060, by plane table methods. The work was kept as near the center of the photograph as overlap would allow in order to minimize distortion and large scale changes.

The five foot contour parallels the shoreline on the ocean side running very close to the MHWL and generally follows near the marsh line on the Sound side. All other contours are isolated (around sand dunes) and there is no distinguishable drainage pattern. The five foot contours were run out in their entirety, and enough shots were taken on the sand dunes to draw the contours in the field, then they were shaped under the stereoscope.

Every reasonable effort was made to junction with the contours of the Geological Survey, but because of the nature of the land (shifting sands) it is believed that the junctions are not satisfactory in their entirety. Shots were taken approximately every 250 feet along the junction line, and were tied to near by Bench Marks with very little error of closure.

#### 7. Mean High Water Line:

The entire Ocean shoreline was driven and inspected by Jeep and where necessary, measurements were taken from topographic features to the MHWL. The shoreline along Pamlico Sound, which is almost entirely grass (apparent shoreline) was inspected by Jeep and by walking along the shoreline. Measurements taken from topographic features proved that very little change in the shoreline has taken place subsequent to the time of photography. There is no perceptible periodic tide in Pamlico Sound and inspection proved that the MHWL is correct as photographed.

#### 8. Low Water Line:

Low water line was inspected by the same method as the MHWL. Where the shoreline was inspected at Mean Low Water, measurements were taken from topographic features to the approximate MLW and these measurements are noted on the photographs.

#### 9. Wharves and Shoreline Structures:

All wharves and shoreline structures are discernible on the photographs and have been labeled.



10. Details Offshore from the High Water Line:

All details visible from the shoreline is discernible on the photographs and have been labeled.

11. Landmarks and Aids to Navigation:

All existing landmarks have been pricked and labeled on the photographs and Form 567 submitted. Those to be deleted have been reported on Form 567.

Four non-floating aids to navigation are found along the channel into Rodanthe in Quad T-8712, one of these has been pricked and labeled on Photo 16054. The remaining three are to be located (Plane table method suggested) on the map compilation by the field edit party.

12. Hydrographic Control:

In accordance with the instructions for this project the existing horizontal control was supplemented by Topographic Stations in order to have horizontal control at not more than one mile intervals. Where natural objects were not available these stations were marked by standard topographic station disks set in the top of 6" round precast concrete monuments.

13. Landing Fields and Aeronautical Aids:

There are no landing fields or aeronautical aids in these Quadrangles.

14. Road Classification:

There are no graded or improved roads in these quadrangles. The roads used are no more than trails across the sand, and the trail used is according to the whim of the driver. The most used North-South road traversing these quads was delineated on the photographs.

When the tide is low enough to allow it, practically all driving is done on the beach.

15. Bridges:

One bridge exists in quadrangle T-8711 and is classified; but this bridge is seldom used.

16. Buildings and Structures:

Adequately covered on photographs.

17. Boundary Monuments and Lines:

The boundary of the Pea Island Migratory Bird Refuge is marked by monuments, according to information furnished this office by the Dept. of Interior, Fish and Wild-life Service. The monuments marking the southern boundary could not be recovered. The aid of a care-taker of the Refuge (Sinclair Midgett) was obtained. No trace of the boundary monuments could be found with Mr. Midgett's aid.

An old fence line which is the former property line and also marks the southern boundary of the Refuge, according to Mr. Midgett, was identified on the photographs to enable compilation of the boundary.

The description and maps of the above boundary will be the subject of a special report by Mr. A. J. Wraight, Topographic Engineer and will be submitted at a later date. *Filed in General Files of the Division of Photogrammetry*

18. Geographic Names:

Geographic Names were investigated in the field and will be the subject of a special report by Mr. A. J. Wraight, Topographic Engineer. *Filed in Geographic Names Section of the Division of Charts.*

Submitted  
11 March 1947

*George E. Varnadoe*  
George E. Varnadoe *JSH*  
Topographic Engineer

Approved  
March 1947

*Riley J. Sipe*  
Riley J. Sipe  
Chief of Party

COMPILATION REPORT  
TO ACCOMPANY  
QUADRANGLE T-8711

26 AND 27. CONTROL AND RADIAL PLOT:

A special report prepared by Milton M. Slavney, Photogrammetric Engineer, was submitted under separate cover 4 August 1947. Special Report filed in General Files of the Div. of Photogrammetry

28. DETAILING:

The map manuscript of this quadrangle is divided into a north half and south half.

All planimetry was compiled from nine-lens photographs. No detail points were established on the north half of this quadrangle as there were more than the normal number of pass points located by the radial plot. On the south half, it was necessary to cut in a few detail points due to the scale of the photographs covering this area.

In a few places where the compiler had difficulty interpreting the field inspection it was noted on a discrepancy overlay for further investigation by the field editor.

29. SUPPLEMENTAL DATA:

The contours of this area were compiled from 1: 10,000 scale photographic enlargements of the U.S. Geological Survey planetable sheets of Cape Hatteras National Park surveyed in 1939.

30. MEAN HIGH-WATER LINE:

The mean high water line has been delineated according to the field inspection submitted. (Reference paragraph 7 of Field Inspection Report.)

31. LOW-WATER AND SHOAL LINES:

The low-water line along the Atlantic Shoreline has been delineated according to field inspection notes. No other low-water or shoal lines were visible on the photographs or recovered by the field inspector.

32. DETAILS OFFSHORE FROM HIGH-WATER LINE:

No offshore obstructing detail was noted by the field inspection.

33. WHARVES AND SHORELINE STRUCTURES:

There were no wharves, piers or other shoreline structures recovered by the field inspector. All buildings discernible on the photographs have been delineated.

34. LANDMARKS AND AIDS TO NAVIGATION:

The landmarks recovered are being submitted with this report on form 567. Attention is called to three landmarks that fall outside the limits of this quadrangle which have been deleted by the field inspector. They are noted on a section of Nautical Chart No. 1229 being submitted with this report. (Attached to form 567).

35. HYDROGRAPHIC CONTROL:

No hydrographic stations were established. Descriptions for eight topographic stations are being submitted on form No. 524.

36. LANDING FIELDS AND AERONAUTICAL AIDS:

No landing fields or aeronautical aids appear in this quadrangle.

37. POLITICAL BOUNDARIES:

No information on boundaries has been received as of the date of this report. See Item 37 of Review Report.

38. BRIDGES:

Two fixed wooden bridges, with skiff clearance only, appear within the limits of this quadrangle. They have been delineated and labeled according to field inspection notes.

39. CONTOURS:

Reference paragraph 29.

The contours were transferred to this map manuscript by holding to the planimetry where possible. In areas where this could not be done, the sand dune ridges and tops were outlined under the stereoscope and used as a guide for transferring the contours to the map manuscript. On this particular quadrangle the projection could not be held as considerable difference in scale and distortion in paper was found.

Copies of the supplemental field instructions and letters relative to the contouring of quadrangles T-8711 to T-8714 are incorporated in this report.


44. COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES:

A comparison was made with the U.S. Geological Survey plane table sheets of this area made in 1939. The general shoreline features compared favorably except for a 40 to 50 meter recession of the Atlantic Shoreline. Since the date of the foregoing survey, two dredged canals supported by dykes have been constructed and apparently abandoned. These two canals fall on the north half of the map manuscript and extend from approximate latitude  $35^{\circ} 41.2'$  to  $35^{\circ} 42.1'$  and  $35^{\circ} 42.9'$  to  $35^{\circ} 44.2'$ .

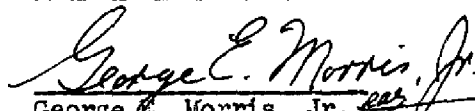
45. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with U.S. Coast and Geodetic Survey Chart No. 1229, published December 1942 (7th edition) and revised to 23 December 1946. The scale of this chart is too small for a favorable comparison of anything except the general shoreline. Along the sound side from latitude  $35^{\circ} 41'$  southward for about three miles, the shoreline on the nautical chart and that compiled on this manuscript differ considerably. Where salt sand flats are shown on this compilation the chart shows water. Water is shown also in the vicinity of the fixed bridges separating the area into two distinct islands.

Respectfully submitted,

  
Rudolph Dossett  
Photogrammetric Aid

Approved and Forwarded:

  
George E. Morris, Jr.  
Lieut. Comdr. USC&GS  
Chief of Party.

FIELD EDIT REPORT  
Quadrangle T-8711  
35°37'30"-75°26'30"/7.5  
Project Ph-5(45)  
Riley J. Sipe, Chief of Party

The field edit of this quadrangle was completed during June, 1948 by Joseph K. Wilson, Cartographer.

46. METHODS

This quadrangle was inspected by truck, traversing all existing roads. All features added to the map compilation were cut in by planetable or from measurements from topographic features.

Reference to the letter from Chief, Division of Photogrammetry (Field Edit of Barrier Beaches) dated 18 May 1948, to Lieut. Comdr. Riley J. Sipe.

47. ADEQUACY OF THE COMPILATION

The compilation was found to be adequate and complete except for a few minor details in reference to contours and marsh.

All roads were reclassified according to Photogrammetry Instructions No. 10, dated 14 April 1947.

48. ACCURACY TESTS

There were no accuracy tests specified for this quadrangle.

18. GEOGRAPHIC NAMES

All names shown on the Geographic Names Prints are correct as shown.

The map was examined for possible errors by Mr. F. G. Gray of Avon. Mr. Gray has been a resident of the vicinity for over forty years and is highly familiar with the area. He could find no errors.

Submitted:  
25 June 1948

*Joseph K. Wilson*  
Joseph K. Wilson  
Cartographer, Photo.

Approved:  
25 June 1948

*Riley J. Sipe*  
Riley J. Sipe  
Chief of Party



Division of Photogrammetry  
Review Report of  
Topographic Map Manuscript T-8711

Subject numbers not used in this report have been adequately covered in other parts of the Descriptive Report.

26 Control

National Park Service third order bench marks are located at half mile intervals along the barrier beach, and are described as mile posts, MP 30, MP 30.5, etc. Recovered bench marks have been shown on the map manuscript by the appropriate BM symbol. Unrecovered, National Park Service bench marks, which were transferred to the map manuscript from U. S. Geological Survey maps, have been shown as non monumented bench marks, along with the mile post designations; they will be published <sup>as</sup> ~~on~~ spot elevations.

28 Detailing

The original delineation was adequate except for minor corrections and changes made by the reviewer.

For added information, <sup>separate</sup> classifications have been given to salt sand flat and sand on the manuscript. Both features will be shown by the same symbol on the published map.

30 Mean High Water Line

The mean high water line has been delineated as of the date of photography, and supplemented by the field inspection. The action of wind, tide, current, and shifting sands, cause frequent changes in the shoreline and it is subject to continual change.

37 Political Boundaries

Boundaries were investigated by the field inspection party and the subject is adequately covered by a Special Report on Boundaries PH5, filed in the general files of the Division of Photogrammetry.

The Cape Hatters <sup>a</sup> National Seashore Recreation Area, mentioned in the Special Boundary Report is not applicable to this map. The project is in a planning stage, making the final boundaries and date of materialization very questionable.

39 Contours

The contours delineated on the map manuscript are 1939 contours by the U. S. Geological Survey. The compiler transferred the contours to the map manuscript and adjusted them to the planimetry.



Major adjustments, to meet conditions existing at the time of field edit were made by the field edit party and reviewer.

The contours are subject to continual change, due to the unstable sand dunes.

#### 43 Geographic Names

Geographic Names were investigated by the Field Inspection Party and have been approved by the Geographic Names Section of the Division of Charts. Attached, following the review report, is a list of all Geographic Names. A special Geographic Names Report, Ph 5 is filed in the Geographic Names Section of the Division of Charts.

#### 44 Comparison with Existing Topographic Surveys

In addition to the comparison mentioned under item 44 of the compilation report, comparison was made with the following:  
(A) Quadrangle, (B) Topographic Surveys. All common Topographic features are superseded by T-8711.

(A) U. S. Engineers, Roanoke Island, 1:125,000, 1943

(B)	367	1:20,000	1852
	2951	1:20,000	1909
	3706	1:40,000	1917
	3707	1:40,000	1917

#### 45 Comparison with Nautical Charts:

See sub heading 45 in the Compilation report.

#### 47 Adequacy of Compilation

An examination of map manuscript T-8711 reveals it to be complete in all details as a topographic quadrangle and as a base map for common area nautical charts and hydrographic surveys.

#### 48 Accuracy Test

##### Horizontal

No horizontal accuracy test was made. The combination of adequate 9-lens photographic coverage, 9-lens radial plot methods and the adequate horizontal control insures a horizontal accuracy equal to or better than National Map Accuracy Standards.

Due to the unstable shoreline and shifting dunes the accuracy applies to the delineation of details as of the date of photography supplemented by field inspection and field edit surveys.



Vertical

No vertical accuracy test was made. The unstable characteristics of the dunes render any test useless.


Accuracy Statement

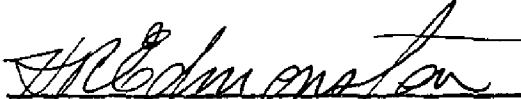
The published map will carry the following statement:  
"This map complies with National Standards of Map Accuracy",  
supplemented by appropriate statements on unstable features.


Reviewed by:


  
Harland R. Cravat 8/11/48

Approved by:

  
Chief, Review Section *SB*

  
Chief, Nautical Chart Branch  
Division of Charts

  
Chief, Division of Photo-  
grammetry

  
Chief, Division of Coastal  
Surveys *146*



# GEOGRAPHIC NAMES

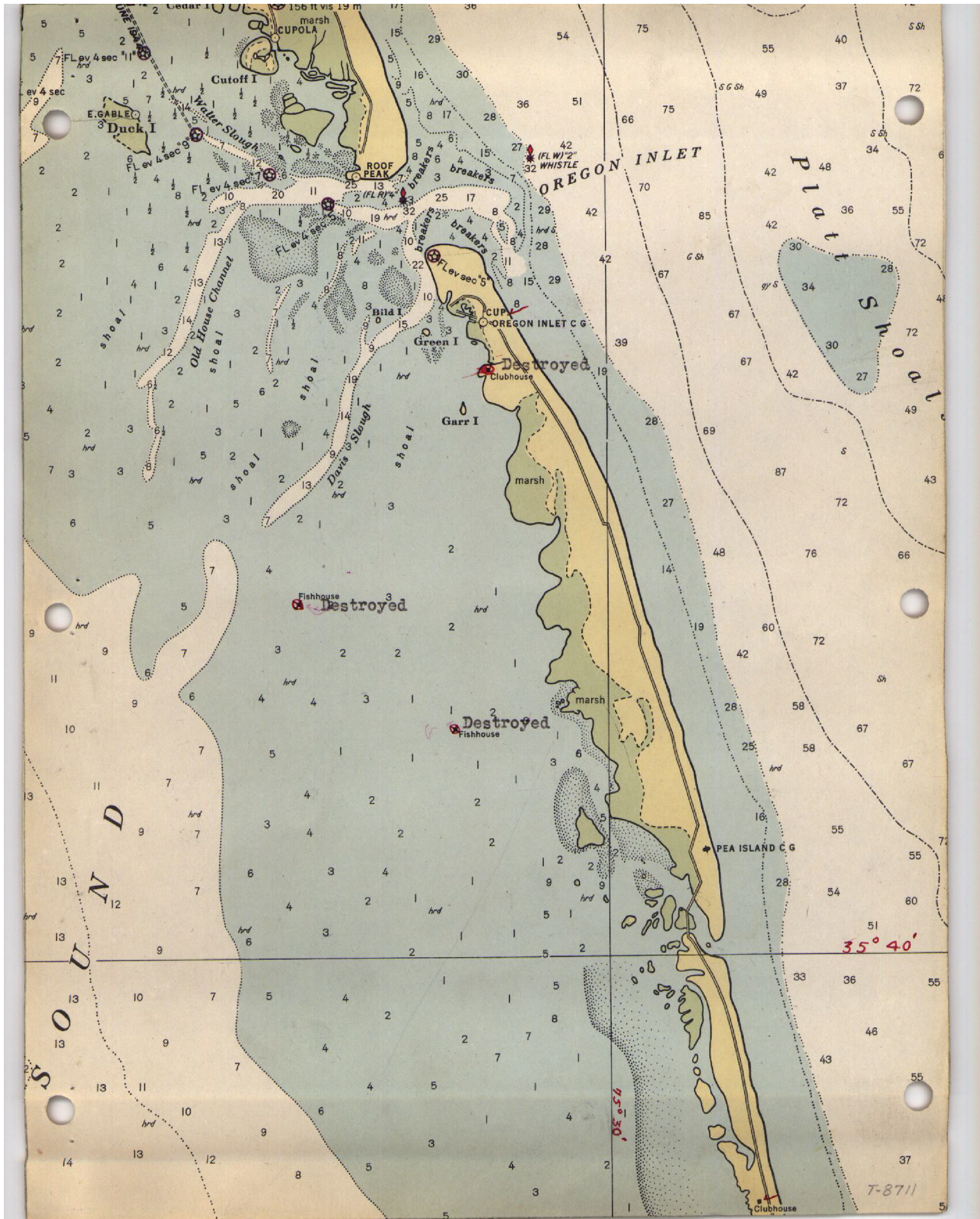
Survey No.

GEOGRAPHIC NAMES										
Survey No.										
Name on Survey	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List		
	A	B	C	D	E	F	G	H	K	
Pea Island										1
Pea Island Coast Guard Station										2
Pamlico Sound*										3
Jack Shoal										4
Dorland Lump										5
Liza Lumps										6
Atlantic Ocean*										7
Beach Slue										8
New Inlet										9
Hog Island										10
Cedar Hammock										11
Saint Clair Lump										12
Wreck Creek										13
Ira Lump										14
Goulds Lump										15
Pea Island National Wildlife Refuge										16
Lagerhead Hills										17
Cat Island										18
Round Hammock Point										19
Round Hammock Bay										20
Salt Springs										21
Sand Ridge										22
Sand Ridge Lodge										23
Eagles Nest Point										24
Eagles Nest Bay										25
Goat Island Point										26
Goat Island										27

M 234

Name Not needed - Too close to other names, which have greater importance. *TRP*









DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY



**TO BE CHARTED  
TOXBOX DELIVERED**

STRIKE OUT ONE

## NON-FLOATING AIDS-OR LANDMARKS FOR CHARTS

Morehead City, N.C. - 24 January, 1947

I recommend that the following objects which ~~have not~~ <sup>(have not)</sup> been inspected from seaward to determine their value as landmarks, be charted on ~~the charts~~ <sup>William G. Carter</sup> the charts indicated.

The positions given have been checked after listing by William A. Rasure, Tampa Photographic Office

Lieut. Comdr. Hiley J. Sipe 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.

DEPARTMENT OF COMMERCE  
U S COAST AND GEODETIC SURVEY  
WASHINGTON 25

73-RCR

2 May 1947

To: Lt. Comdr. George E. Morris, Jr.  
U. S. Coast and Geodetic Survey  
Box 1689  
Tampa, Florida

Subject: Instructions - Project Ph-5(45) - Field,  
Supplement 2

In the Barrier Beach area of North Carolina north of Cape Hatteras considerable contouring was done by the U. S. Geological Survey in 1939, and it is not intended to rework the topography in the areas so covered. Quadrangles affected are T-8711 to T-8714 inclusive.

These contours are to be compiled directly onto 1:10,000 scale manuscripts in this area, and will be accepted without further investigation except for obvious discrepancies, which should be noted for the attention of the field edit party.

It is recognized that junctions will be hard to effect with the contouring done by this Bureau in 1947. If the contours can be joined by reasonable deformation at or near the junction, you will do so on the manuscripts. If the contours are adverse so much that this cannot be done without doing great violence to the contours on either side of the junction, you shall simply indicate the junction with a distinct line on your manuscript. The procedure adopted by you under these alternatives shall be completely discussed in the compilation reports.

Field photographs numbers 16066 and 16067 are being returned to the field party with instructions to rework the contours in the vicinity of Cape Hatteras lighthouse (old) and with the further instruction to effect junction with the U. S. Geological Survey contours at latitude  $35^{\circ} 16'$  if possible. You will, of course, accept the contours of this Bureau rather than the U. S. Geological Survey contours in this area. Your method of indicating junction at this point shall be the same as outlined above for the other areas.

(S) J. H. Hawley  
Acting Director

Rec'd Tampa 5 May

Tampa Photogrammetric Office  
Box 1689, Tampa, Fla.

3 July 1947

To: Chief, Division of Photogrammetry  
U. S. Coast and Geodetic Survey  
Washington 25, D.C.

Subject: Project Ph-5(45) Contouring T-8711 to T-8714

Reference: Instructions - Project Ph-5(45) - Field,  
Supplement 2

We have run into difficulties in using the enlargements of the U. S. Geological Survey sheets for compiling the contours on our 1:10,000 scale manuscripts. There has been so much change between the dates of the survey and of the photographs that we cannot compile directly from the GS sheet.

The manuscript for T-8711 north half, the enlarged GS sheet and two field prints are being forwarded for your examination and recommendations. We will do no further contouring on these quadrangles until we hear from you.

The sand dune ridge along the barrier beach was outlined under the stereoscope and the GS contours fitted to this outline as well as could be done. The distortion in the enlargement makes the holding of projection lines difficult, and there was not enough comparable detail for good control. The legibility of the contours on the GS enlargement is not too good.

The field party in contouring the south half of T-8714 has used a 5-foot interval so we have tried to trace the 5-foot contours.

It will be necessary for the field editor to obtain a better delineation of the high water line on the sound side of the barrier beach than was shown in the field inspection. He will also need to contour along the upper canal and dyke because these are not shown on the GS sheet.

The published GS map would be an aid in interpreting the contours on the enlargements of the GS sheets.

(S) George E. Morris, Jr.  
Officer in Charge  
Tampa Photogrammetric Office

GEM/c

(9)

18 July 1947

TO: Lt. Comdr. George E. Morris, Jr.  
U. S. Coast and Geodetic Survey  
Box 1689  
Tampa, Florida

Subject: Transfer of U. S. Geological Survey contours  
to manuscripts T-8711 to T-8714, project  
Ph-5.

References: (1) Instructions - Project Ph-5(45) - Field,  
Supplement 2.

(2) Your letter of 3 July 1947. Subject:  
Project Ph-5(45) Contouring T-8711 to  
T-8714.

1. This letter is to clarify reference (1) and reply to  
reference (2).

2. The manuscript for T-8711 (North) and the accompanying  
data have been examined, and it is concluded that your  
transfer of the U. S. Geological Survey contours on this  
manuscript is generally satisfactory and may be continued on  
the remaining manuscripts T-8711 to T-8714.

3. It was understood when the use of the Geological Survey  
contours was undertaken that there would be troublesome  
discrepancies which would have to be adjusted rather arbi-  
trarily in many instances. However, the only alternative  
would be to recontour the area, and the cost is not justified  
because of the continual change occurring in the shoreline  
and the dunes.

4. The credit note on the published quadrangle will state,  
"Contours by the U. S. Geological Survey in 1939. Ad-  
justed for major changes in shoreline and planimetry to  
conditions existing in 1947." Further, the published map  
will carry this note in various places along the shore  
where it is applicable, "Shoreline and dunes subject to  
continual change."

5. You will please include a copy of this letter, to-  
gether with a copy each of references (1) and (2) above,  
in at least one of the descriptive reports and refer to

18 July 1947

these records in the other descriptive reports concerned. Further, as stated in reference (1), you will state in each descriptive report how the contours were transferred and what major adjustments were necessary. Thus, the descriptive report will include an exact record of how this work was handled and will indicate the extent of change since the 1939 contours.

6. A somewhat different procedure in transferring the Geological Survey contours is suggested for the remainder of this work. However, you should understand that this procedure is not required, since the conditions may change from manuscript to manuscript and will not necessarily be in all cases exactly as on T-8711 (North).

- (a) New 1:10,000 scale reproductions of the U. S. Geological Survey planetable sheets will be forwarded to you immediately. These are on low distortion paper and are relatively close to scale.
- (b) The new photographic enlargements should be subdivided to show even minutes of latitude and longitude, and the contours transferred by projection in so far as this is practicable. Examination of T-8711 (North) indicates that in many instances contours cannot be transferred by projection and must be handled generally as stated in subsequent paragraphs.
- (c) Where the shoreline or other planimetric details have changed, then the projection must be ignored and the contours transferred by holding as nearly as practicable to the planimetry. Further, in some cases it may be best to outline the sand dune area along the barrier beach under the stereoscope and transfer the general area roughly into position on the manuscript as a guide in transferring the contours. However, in doing this no attempt should be made to revise the details of the dunes to fit their present shapes since the contours are to be carried as of 1939.
- (d) After completion of this transfer in the photogrammetric office, there doubtless will remain some places where field edit adjustment will be necessary, as at the places



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marked "B" on manuscript T-8711, and these areas shall be indicated in detail on the discrepancy overlay or discrepancy sheet for information of the field editor. However, you should take care to refer to field edit only necessary items and not refer the work to field edit where the contours can be logically shifted to fit the new planimetry.

7. With reference to page 2 of your letter of 3 July, it might be well to refer your questions regarding field inspection of the inner beach back to the field party for clarification in so far as this can be done by the field inspector without revisiting the area. This might clarify some of your questions immediately and leave less for the field editor. Shoreline on the salt flats is apparently very indefinite and will have to be interpreted in rather general terms in any case. It seems to be generally good on T-8711, and in some cases sufficiently definite to be shown with a solid line rather than the broken line used on the manuscript.

8. The Geological Survey work in this area has not been published and so no published maps of the barrier beach are available.

(signed) S. M. HAWLEY

Acting Director.

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78-rb

22 April 1948

To: Lt. Comdr. Riley J. Sipe  
U. S. Coast and Geodetic Survey  
P. O. Box 1292  
New Bern, North Carolina

Subject: Field Edit of the Barrier Reef, Oregon Inlet  
to Portsmouth Island - Project Ph-5(46)

The field edit of the Barrier Reef from Oregon Inlet to Portsmouth Island, Project Ph-5(46) has been tentatively planned in this office after consultation with Mr. George Varnadoe and Mr. Stanley Hathorn, and the following statements are for your consideration in making arrangements for doing this work. They are suggestive, not directive, and intended primarily to assure that a minimum of time is spent on the field edit of this area but suggesting the principal items to be included.

In general, a visual inspection of the area by one of your most capable men, is all that is required for the field edit of these maps. It is not intended that extensive contour revisions be made, but that minor corrections may be requested on the discrepancy prints of the maps where this office has been unable to reconcile the contours with the information available, or where the topography is incomplete. Major errors, evident by visual inspection, should be corrected, but changes resulting from shifting sand dunes should be neglected.

Some such schedule as the following should be worked out, prearranging with the Coast Guard for food and lodging for our men at Coast Guard Stations enroute and for transportation where it would be most advantageous and economical:

1. One to two days inspecting Oregon Inlet to Hatteras.
2. Prearrangement with the Coast Guard for transportation across Hatteras Inlet to Coast Guard Station No. 186, and for automotive transportation for the field edit of Ocracoke Island and return to Hatteras. One day.

Lt. Comdr. Riley J. Sipe  
22 April 1948  
Sheet #2

3. Prearrangement with the Coast Guard for boat transportation for the inspection of aids to navigation at Avon, Hatteras Inlet and Ocracoke Inlet. One to two days.
4. Your party should not have to go onto the Portsmouth Banks, but should accept the work as it was compiled from the field inspection data. However, if you feel that a visual inspection by boat is desirable, this may be done when you work the mainland; possibly when you verify the aids to navigation in Core Sound.

The field edit materials for Map Manuscripts T-8711 to T-8718 inclusive, and T-8727 and T-8728, Oregon Inlet to Portsmouth Island, will be forwarded to you on about 1 May 1948.

**RECEIVED**

K. T. Adams  
Chief, Div. of Photogrammetry

18 May 1948

To: Lt. Comdr. Riley J. Sipe  
U. S. Coast and Geodetic Survey  
P. O. Box 1292  
New Bern, North Carolina

Subject: Field Edit of the Barrier Beaches, project  
Ph-5

1. There follows a list of correspondence pertinent to this subject and which should be reviewed in connection with this letter:

- ✓ (1) Instructions, Project Ph-5, Field, Supplement 2, dated 2 May 1947.
- ✓ (2) Letter to Chief, Div. of Photogrammetry from the Tampa Photogrammetric Office, dated 3 July 1947. Subject: Contouring T-8711 to T-8714.
- ✓ (3) Letter from the Acting Director to the Tampa Photogrammetric Office, dated 18 July 1947. Subject: Transfer of U.S.G.S. Contours to Manuscripts T-8711 to T-8714.
- ✓ (4) Letter from the Chief, Div. of Photogrammetry to Lt. Comdr. Sipe, dated 22 April 1948. Subject: Field Edit of the Barrier Reef, Oregon Inlet to Portsmouth Island.
- (5) Letter from Lt. Comdr. Sipe to the Chief, Div. of Photogrammetry, dated 11 May 1948. Subject: Field Edit of the Barrier Reef, Project Ph-5.

2. Copies of references (1) to (3) have been bound with the original descriptive report T-8711, which is filed in this office, and I believe that copies of these were also bound in the duplicate report for T-8711 forwarded to you for field edit. Copies of references (4) and (5) and this letter will be bound with descriptive report T-8711, and it might be preferable for you to add copies of the same to your duplicate copy of report T-8711.

18 May 1948

3. Purpose of the field edit.--The barrier beaches in this part of project Ph-5 are evidently subject to frequent change. It is intended that this area be mapped as of the date of the photographs or the field inspection. The field edit shall be limited to general verification of the compiled maps as of the date of the photographs or field inspection, and to the location of aids to navigation omitted by the field inspection and to location of new important cultural features, if any. The field edit shall not attempt to revise natural features, either planimetry or contours, for changes occurring since the photographs were taken. In the area contoured by the Geological Survey, it is not intended that the field edit revise the contours to show present conditions. This paragraph may be taken as a general instruction, and notes made on the field edit discrepancy print may be ignored if they are not necessary to the purpose as stated herein and as discussed in more detail in subsequent subparagraphs.

- (a) Field edit of shoreline details.--With reference to the questions on the field edit print as regards the Pamlico Sound shoreline, the field edit is not required to submit notes on the photographs or other proof of interpretation of this area. Where items have been questioned by the photogrammetric office or the Review Section, the field editor should decide whether the interpretation as now shown on the manuscript is correct or whether it should be changed. If he recommends a change, he should furnish any additional information required for the re-compilation.
- (b) Geological Survey contours.--As explained in references (1) to (3), and particularly in paragraph 4 of reference (3), the intent was to transfer these contours bodily to our new manuscripts without any attempt to revise them to show present conditions, except that as a whole they were to be shifted to fit the new shoreline as compiled from the 1946 photographs. I believe that this has been done by the photogrammetric office and, generally, nothing is left for the field edit with reference to the Geological Survey contours, except where the Washington Office reviewer has requested additional information for joining the U. S. Geological Survey contours with our contours. In this case, the field editor must look over the ground and make the junction by which ever of the methods stated in reference (1) he considers to be most appropriate.

18 May 1948

- (c) With further reference to the U. S. Geological Survey contours, the principal task is to adjust them bodily between the mean-high-water lines of the inner and outer shoreline. It is not important that they be revised for small details, such as low spots now showing on the photographs, and notes made on the discrepancy print with reference to these minor details may be ignored.
- (d) The original instructions did not call for recovery of all of the Park Service bench marks, and no further recovery of these marks need be undertaken by the field editor.
- (e) The outer coastline is subject to frequent change, and this fact will be noted on the published map. The field editor should indicate places where such notes are particularly pertinent. In several cases, I believe that the mean-high-water line on the outer coast has been compiled as a dashed line. If this line was compiled with reasonable accuracy as of a given date of the photographs, then I think it could be shown with a solid line, and I shall be glad to have the field editor's recommendation regarding this.
- (f) Fixed aids to navigation omitted by the field inspection shall be located by field edit, and any important new cultural features, as a road or building, should be added by the field editor.

4. I hope that this letter has clarified the situation as to what is required of the field editor in this area. If you have further questions about it, please do not hesitate to write to me.

K. T. Adams  
Chief, Division of Photogrammetry

18 June 1948

To: Lt. Comdr. Riley J. Sipe  
U. S. Coast and Geodetic Survey  
P. O. Box No. 1  
Washington, North Carolina

Subject: Field Edit Data for T-8715,  
T-8716, T-8727 and T-8728

The field edit data for T-8715, 8716, 8727 and 8728 have been received in this office and have been investigated prior to being forwarded to the Tampa Office for the application of field edit corrections.

It appears from the investigation of the field edit sheets made in this office that you have accomplished the work very satisfactorily. The field edit reports, however, do not give me all the information I would like to have as a guide to the planning of similar unusual conditions in the future. I wish you would please prepare a letter to me stating the details as to how this work was accomplished, the amount of time consumed, whether or not the instructions for doing the work were adequate and any other information that you care to include which might have improved our working relationship in this instance.

(Signed) K. T. Adams

K. T. Adams  
Chief, Division of Photogrammetry

COPY  
P. O. Box 1, Washington, N. C.

13 July 1948

To: Chief, Division of Photogrammetry  
U. S. Coast and Geodetic Survey  
Washington 25, D. C.

Subject: Field Edit of Barrier Beaches, Project Ph-5(45)

Reference: 78-rb 18 June 1948

The field edit of the following quadrangles has been completed: T-8711, T-8712, T-8713, T-8714, T-8715, T-8716, T-8717, T-8718, T-8727 and T-8728. This work was done by the field editor and one man in five weeks.

The chief of party and the field editor inspected the area by airplane prior to the field edit. This gave the field editor a good overall picture of the work and numerous changes noted were easily corrected during the field edit. Many discrepancies noted by the Compilation Office would have been costly to check had it not been for the airplane flight. The time consumed for the inspection of the area by airplane was about three hours and the cost approximately thirty dollars. On future field edit assignments it is recommended that an inspection be made by airplane.

Wherever necessary a visual inspection of the area was made by truck and boat. All errors noted during this inspection were corrected. However, changes resulting from shifting sand dunes were ignored.

It was necessary for the field editor to travel by boat to Ocracoke Island and Hatteras. Automotive transportation for the field edit of Ocracoke Island was secured from the Coast Guard by pre-arrangement. It was not possible nor practical to arrange for automotive transportation at Hatteras and this party carried a jeep over by ferry. Nor was it possible to procure food and lodging at any of the Coast Guard Stations.

The five weeks consumed in the completion of the field edit of the ten quadrangles included time spent in writing reports, travel, etc. The cutting in of fixed aids consumed the greater time, requiring about two days in the vicinity of Hatteras. All aids to navigation from Ocracoke Inlet to Rodanthe either had to be verified or cut in for the first time. It was necessary to rent a local fishing boat for six days at a cost of from twenty to thirty-five dollars per day.



All aids to navigation in the ten quadrangles were cut in by planetable on metal mounted sheets with the exception of the lights at Rodanthe. Excellent results were obtained. It is recommended in the future that this party be furnished a metal mounted sheet for all aids to navigation to be located during the field edit. The photo hydro stations located by the Compilation Office were very satisfactory.

The review section asked for verification of several lights which had been pricked direct on the photographs. In all instances referred to by this letter, the lights were positively identified and located near a point of land. It is believed by this party that since difficulties were encountered with the sextant fixes in this area that the reviewer had a tendency to question all of the aids to navigation. In all cases these aids were verified.

It has been noted on the latest field edit sheets received in this office that the reviewer has shown much more consideration in not asking for minor details which in some instances are very difficult to obtain.

In areas similar to the Portsmouth Banks and around the inlets the project instructions should state the MHWL will be accepted as of the date of photography; except, in relatively small areas of considerable change. The MHWL in the latter areas should be located by planetable on the photographs. This is particularly true of the majority of the inlets on the east coast.

The field inspection and the field edit parties are usually in very poor positions to determine and delineate the MLWL along an open beach. At best, they can determine the MHWL with very little more accuracy than an approximate MLWL. This should be considered more by the compiler and reviewer in the future than in the past. The MLWL along such bodies of water as Pamlico, Core, Back and Bogue Sounds will be the line of zero soundings of the hydrographic party. The reviewer should give more consideration to this fact.

The securing of transportation and lodging from the Coast Guard is usually very difficult. Most of these stations are undermanned and it is very difficult to make prearrangement for transportation because of the nature of their work. Also in this vicinity the personnel of the Coast Guard are closely related to the owners of local boarding houses and the treatment received where Coast Guard quarters were available was not always as cordial as is desired. It is recommended in the future that no dependability be placed in securing transportation and lodging from the Coast Guard in like areas except in an extreme emergency.

(Signed) RILEY J. SIPE  
Chief of Party