

007 20 1949

8746

N&S

Diag'd. on Diag. Ch. No 1233

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey TOPOGRAPHIC

Field No. PH-5(45)A Office No. T-8746

LOCALITY

State North Carolina

General locality Outer Banks

Locality Core Banks

1946-'49

CHIEF OF PARTY

R. J. Sipe

LIBRARY & ARCHIVES

DATE December 20, 1949

B-1870-1 (1)

8746

DATA RECORD

T-8746

Quadrangle (II):

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

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

Copy filed in *Division of*
~~Report No. T-~~ *Descriptive*
~~(VI)~~ *Photogrammetry Office Files.*

Completed survey received in office:

*May 1949*Reported to Nautical Chart Section: *May 1949*Reviewed: *26 Oct 1949*

Applied to chart No.

Date:

Redrafting Completed:

Registered: *2 Dec. 1949*

Published:

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): COWPEN 1913

Lat.: 34° 42' 35" *447* (1092.3m) Long.: 76° 28' 28" *930* (736.2m) Adjusted
~~xxxxxx~~

State Plane Coordinates (VI): N.C. state Grid

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>
16115	4-7-46	0931	1:10,000	2.8 ft.
16116	"	0932	"	2.8 "
16117	"	0933	"	2.8 "
16118	"	0934	"	2.8 "
16119	"	0935	"	2.8 "
16172	"	1105	"	3.3 "
16173	"	1109	"	3.3 "
16190	"	1131	"	3.2 "

Tide from (III): Cape Lookout (Ref. Sta. Hampton Roads)

Mean Range: 3.7

Spring Range: 4.4

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

John S. Howell

Field Inspection by: John R. Smith
Robert A. Horn

date: 27 Feb. 1947
26 Mar. 1947

Field Edit by: *Elgan T. Jenkins*

date: *15 Apr. 1949*

Date of Mean High-Water Line Location (III): 27 Feb., 10 Mar., 1947

Projection and Grids ruled by (III) T. L. J. (Wash. Off) date: 27 Aug., 1947

" " " checked by: " " date: 27 Aug., 1947

Control plotted by: J.A. Giles
W.H. Shearouse

date: 3 Sept. & 22 Sept.

Control checked by: C.H. Baldwin
M.M. Slavney

date: " " 1947

Radial Plot by: M.M. Slavney

date: 27 Oct., 1947

Detailed by: C.H. Baldwin

date: Nov.-Dec., 1947

Reviewed in compilation office by: J.A. Giles

date: Dec. 1947

Map Manuscript
Elevations only
checked by: J.A. Giles

date: Dec., 1947

STATISTICS (III)

Land Area (Sq. Statute Miles): 3.5

Shoreline (More than 200 meters to opposite shore): 20.6 statute miles

Shoreline (Less than 200 meters to opposite shore): 9.2 statute miles

Number of Recoverable Topographic Stations established: 7 ~~10~~

Number of Temporary Hydrographic Stations located by radial 3
plot:

Leveling (to control contours) - miles: 6

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:

SCALE FACTOR 1 of 1

FACTOR DISTANCE
FROM GRID OR PROJECTION LINE
IN METERS

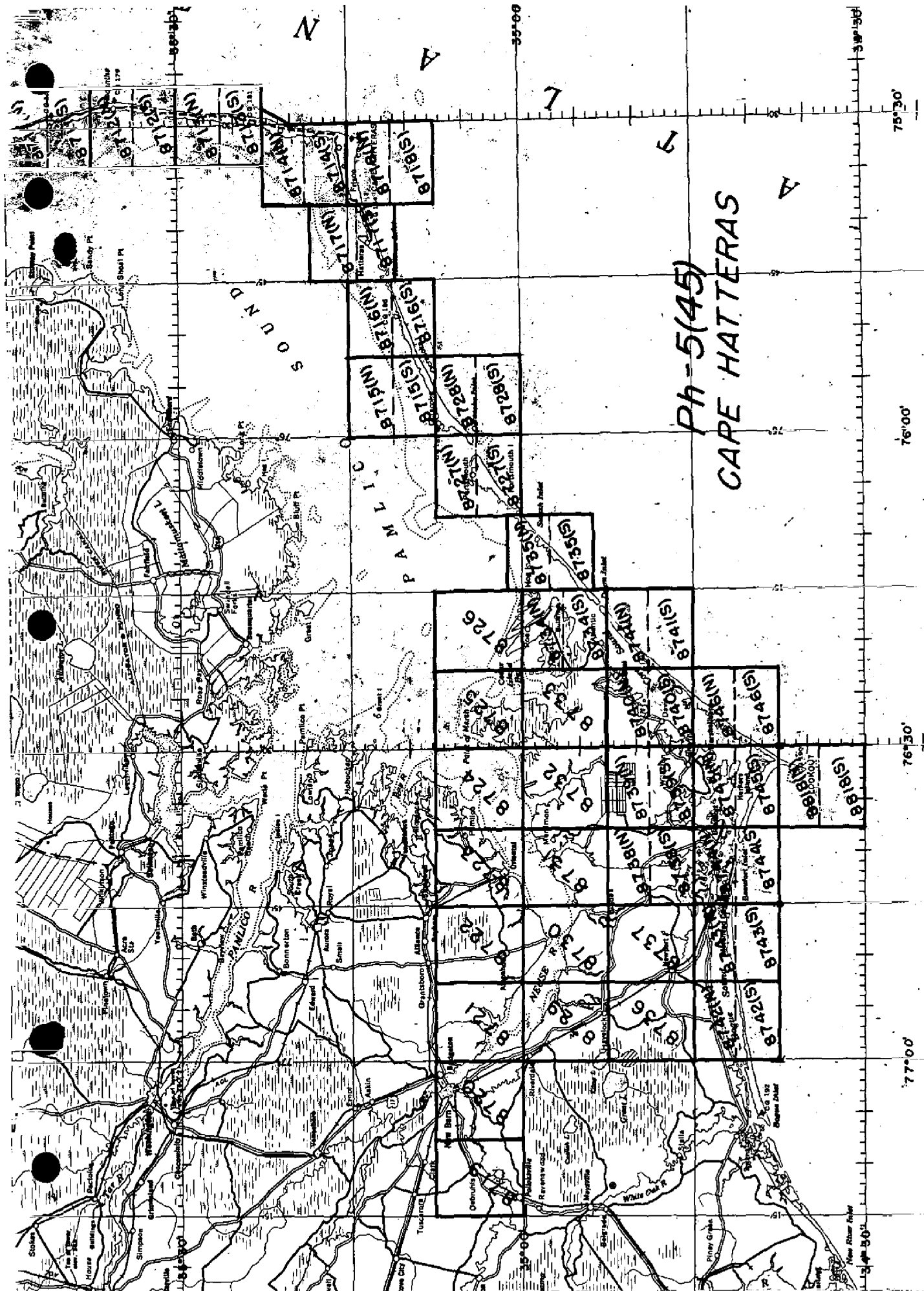
FORWARD (BACK)

34	43	37.610
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DATE 10 July, 1947

M-2388-12

PH-5(45)
CAPE HATTERAS



Summary Report to Accompany T-8746

Topographic map T-8746 is one of 37 standard 7½ minute quadrangles in Project Ph-5(45) and falls on the south side of the project at the SW end of Core Banks and Core Sound at 76°30' W longitude. This is a planetable contouring project. T-8746 is composed of two complete topographic map manuscripts at 1:10,000 scale, which are named the S/2 and the N/2. The field work was accomplished during February and March 1947 by Riley J. Sipe, Chief of Party, and corrections and additions to 15 April 1949 during field edit, E. R. McCarthy, Chief of Party. The Tampa Photogrammetric office did all work incident to office compilation.

Chronology of Mapping Operations:

- a. Nine lens aerial photography and laboratory processing 1:10,000 scale.
- b. Field operations included shoreline inspection, spirit leveling (4th order) incident to planetable contouring, recovery, establishment, and identification of horizontal and vertical control, clarification of photographic detail, and geographic names investigation.
- c. Compilation by graphic methods.
- d. Preliminary office inspection prior to field edit.
- e. Field edit.
- f. Final review of both manuscripts to insure completeness and conformance with specifications, and to include corrections in accordance with the field edit survey.
- g. Processing of map manuscript.

A 1:20,000 scale glass plate negative will be prepared for transmittal to the Geological Survey.

T-8746 will be published and distributed by the Geological Survey at a scale of 1:24,000 as a standard topographic quadrangle in accordance with an agreement of March 25, 1947.

Data pertaining to T-8746 will be filed and may be obtained as follows:

- a) Filed in the Division of Photogrammetry:
 - 1) Two manuscripts, N/2 and S/2 T-8746, 1:10,000 scale acetate manuscripts, complete with field edit and final review corrections applied. All field edit work was furnished on the discrepancy prints submitted by the W.O.
 - 2) A duplicate descriptive report, (includes both N/2 and S/2).
 - 3) Topographic cards (524), and horizontal control identification cards.

- b) Registered and filed in the Bureau Archives:
- 1) Descriptive Report (includes both N/2 & S/2)
 - 2) 1:10,000 scale cloth mounted lithographic print of map manuscript T-8746 N/2.
 - 3) 1:10,000 scale cloth mounted lithographic print of map manuscript T-8746 S/2.
 - 4) The above prints are to be permanently registered under one number (T-8746) and when it is published, a cloth-backed copy of the published map, at a scale of 1:24,000, also will be registered.

FIELD INSPECTION REPORT
T-8746 (340-37.5' /760-22.5' /7.5')
Project Ph-5(45)
Sub-project B

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, undated; and Supplement 1 to the above, dated 11 December 1946, except for deviations noted herein.

The field work on this quadrangle was performed by the personnel on the dates indicated:

<u>NAME AND TITLE</u>	<u>FIELD WORK</u>	<u>DATE</u>
John S. Howell Topographic Engineer	Horizontal Control Shoreline Inspection Interior Inspection	27 Feb.- 10 Mar 47
John R. Smith Engineering Aid	Supplemental Vertical Control	26 Feb 47
Robert A. Horn Photogrammetrist	Contours	21 Mar - 26 Mar 47

1. Description of the Area:

The entire land area of this quadrangle is a part of Core Banks which in turn is a part of the North Carolina Barrier Beaches and consists of nearly flat beaches on the Atlantic Ocean side and low flat marshes on the Core Sound side. The sand beaches are the highest part of the land mass with an average elevation of about eight feet above mean sea level. At the times of high storm water the entire area is awash and the storm water drains westward to Core Sound. The western half or the marsh area is covered with marsh grass and very little other vegetation can be found.

2. Completeness of Field Inspection:

Field inspection is believed to be complete and adequate. At the time of shoreline inspection it was determined that the Atlantic Ocean Mean High Water Line had built itself out about thirty meters subsequent to the time of photography. For other details of this phase refer to the appropriate paragraphs below.

3. Interpretation of the Photographs:

All phases of the field work, except the establishment of supplemental vertical control, was completed on 9 lense 1/10,000 scale photographs and no difficulty was encountered in the interpretation of the photographic detail.

4. Horizontal Control:

Nine Horizontal Control stations were searched for or recovered and of these two were pricked on the photographs for use in control of the radial plot. Horizontal Control was supplemented by the establishment of topographic stations. *The radial plot checks within the accuracy limits required since six additional triangulation stations were established*

5. Vertical Control: *during field edit, and plotted on the ms.*

There are no bench marks of this or any other Agency within the limits of this quadrangle. Eight temporary bench marks were established by fourth order spirit leveling for the convenience of the contour party.

6. Contours and Drainage:

To expedite the field work all contouring was performed on 9 - lense 1/10,000 scale photographs. Control of the contours was maintained by reference to the fourth order temporary bench marks mentioned in the above mentioned paragraph of this report. Two five-foot contours generally parallel the beach with one falling on each side of the ridge of sand that has been built up parallel to the beach.

7. Mean High Water Line:

The entire shoreline was inspected by jeep and by walking along the high water line. On the Atlantic Ocean beach the Mean High Water Line was delineated on the photographs and substantiated by measurements from identifiable photographic detail. At this time it was noted that this

beach had built itself out about thirty meters.

On the Core Sound side the shore line is apparent with few exceptions and is easily discernible on the photographs.

8. Low Water Line:

Low water line on the Atlantic Ocean side was measured at only one point; surf and the stage of the tide prevented the obtaining of other measurements.

No definite low water line exists on the Sound side due to the variable nature of the tide. The approximate low water line was indicated on the photographs.

9. Wharves and Shore line Structures:

No wharves or shoreline structures of importance exist in this quadrangle. The few fishing shacks and docks are visible on the photographs.

10. Detail Offshore from Mean High Water Line:

Detail offshore consists of fixed aids to navigation in Core Sound.

11. Landmarks and Aids to Navigation:

No landmarks exist in this quadrangle.

Aids to Navigation were located by theodolite cuts, and listed on Form 567. *Also computed by Div. of Geodesy.*

12. Hydrographic Control:

Three hydrographic stations were selected and pricked on the photographs in accordance with the project instructions. *Described on pricking cards under T-8746*

13. Landing Fields and Aeronautical Aids:

There are no landing fields or Aeronautical Aids within the limits of this quadrangle; however, it is possible for light planes to land on the beach at low water.

14. Roads:

There are no roads or trails in this quadrangle.

15. Bridges:

No bridges exist within the limits of this quadrangle.

16. Buildings:

The only buildings in the area are shacks used as temporary shelter by fisherman.

17. Boundaries:


~~No boundaries fall within the limits of this quadrangle.~~ All land shown falls in Carteret Co. N.C. and the Top. boundaries were added from a map submitted by the county authorities dated Feb. 7, 1949. (26 5 file)

18. Geographic Names:

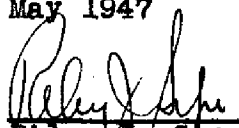
Geographic Names will be the subject of a special report by A. J. Wraight, Topographic Engineer.

OK'd by Mr. Heck

Submitted:
2 April 1947


John S. Howell
Topographic Engineer

Approved:
May 1947


Riley J. Sipe
Chief of Party

COMPILATION REPORT
TO ACCOMPANY
QUADRANGLE T-8746

26 AND 27. CONTROL AND RADIAL PLOT:

A special report was prepared and submitted by Milton M. Slavney, Photogrammetric Engineer, on 17 November, 1947.

Filed under 775(45) in Div. of Hydro - General files.

28. DELINEATION:

The nine-lens photographs used in delineating this quadrangle were of fair to good scale.

The field inspection was adequate, and the map manuscript has been delineated accordingly.

29. SUPPLEMENTAL DATA:

None.

*Planetable contours as
part of field inspection*

30. MEAN HIGH-WATER LINE:

The mean high-water line was delineated according to the field inspection. See field inspection report item No. 7.

31. LOW-WATER AND SHOAL LINES:

The low-water and shoal lines were shown according to the field inspection. All low-water lines on this quadrangle are approximate.

See field inspection report item No. 8.

32. DETAILS OFFSHORE FROM HIGH-WATER LINE:

Details offshore consist of fixed aids to navigation in Core Sound only.

33. WHARVES AND SHORELINE STRUCTURES:

All wharves and shoreline structures have been shown according to instructions.

34. LANDMARKS AND AIDS TO NAVIGATION:

No landmarks were recommended for charting in this quadrangle.

Aids to navigation were located by theodolite cuts and listed on form 567, with the exception of Core Sound Light 36 which requires further field investigation. The position will be scaled and submitted after field edit. *New GP's were obtained during field edit in Apr. 1949.*

R.J.F.

35. HYDROGRAPHIC CONTROL:

Seven hydrographic control stations were located by radial plot
~~and~~ ^{or} theodolite cuts.

4601 NW Gable of unpainted shack.	(Radial Plot)	
4602 Chimney on unpainted shack.	{ " " }	
4603 NW Gable of green shack.	{ " " }	
4604 Core Sound Light No. 36.	(Theodolite Cuts)	
4605 Core Sound Light No. 37.	{ " " }	} Now shown as A (Field edit)
4606 Core Sound Light No. 39.	{ " " }	
4607 Core Sound Light No. 41.	{ " " }	

36. LANDING FIELDS AND AERONAUTICAL AIDS:

None. Refer to field inspection report item No. 13, regarding this subject.

37. POLITICAL BOUNDARIES:

None. *Carteret County, N. Car.*
See 17 (Field Inspection Report) for Twp. boundary note.

38. GEOGRAPHIC NAMES:

All geographic names have been shown according to the geographic name sheet received from the Washington Office.

39. TOPOGRAPHIC STATIONS:

Numerous topographic stations located by the radial plot, disagree with the chained distances from mean high-water to the station. Investigation has been requested of the field editor.

Field edit says OK as they are. RIF

44. COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES:

None available for comparison.

45. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with nautical chart No. 420 bearing a print date of 13 January 1947. No discrepancies were noted, the shoreline being in good agreement. See field inspection report item No. 7.

Approved and Forwarded:

George E. Morris, Jr.
 George E. Morris, Jr.
 Chief of Party.

Respectfully submitted,

Charles H. Baldwin
 Charles H. Baldwin,
 Photogrammetric Aid

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TO BE CHARTED
TO BE CHARTED

STRIKE OUT ONE

NONFLOATING AIDS OR TANKERS FOR CHARTS

Washington, N.C. April 29,

1976

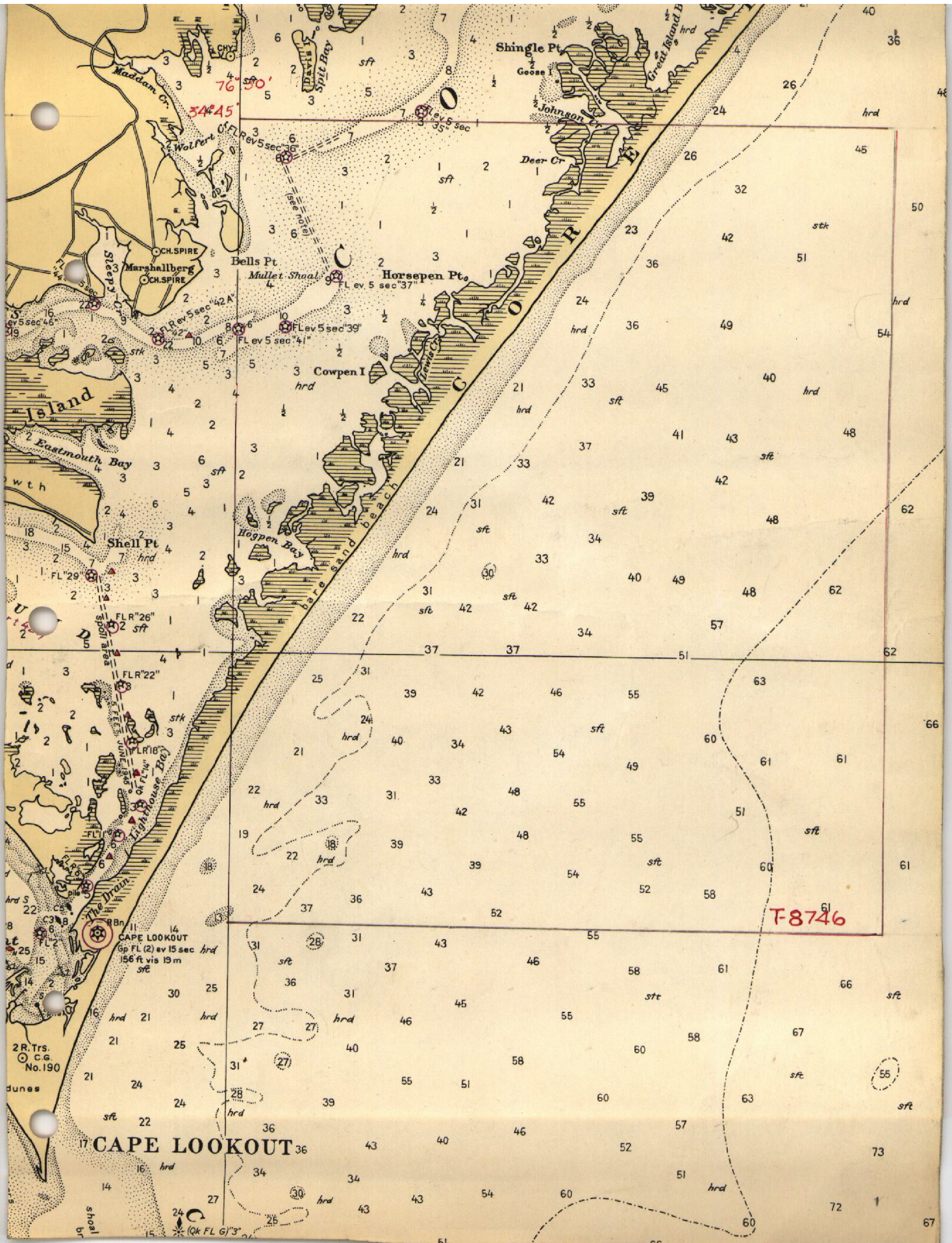
I recommend that the following objects which have ~~(been inspected)~~ been inspected from seaward to determine their value as landmarks be charted on ~~(the chart)~~ the charts indicated.

The positions given have been checked after listing by ~~William A. Measure~~ *William A. Measure*, Tampa Photogrammetric Office *McCarteen and*

E. R. McCarthy	Chief of Party
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[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.



Survey No.

[illegible]

GEOGRAPHIC NAMES

Survey No. 7.8746

GEOGRAPHIC NAMES											
Survey No. 78746											
Name on Survey											
	A	B	C	D	E	F	G	H	K		
<u>Little Deep Marsh Island</u>											1
<u>Hogpen Bay</u>											2
<u>Gunning Hammock Island</u>											3
<u>Atlantic Ocean*</u>											4
<u>North Carolina*</u>		(for title)									5
<u>Carteret County</u>		..									6
<u>Guthrie Hammock</u>		(10-20-47)									7
											8
											9
											10
											11
											12
											13
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											26
											27

M 234

Approved names underlined.
9-17-48.

a. j. w.

* - Decision of BGN

FIELD EDIT REPORT
Quadrangle T-8746
34°-37.5-76°-22.5/7.5
Project Ph 5(45)

E. R. McCarthy, Chief of Party

The field edit of this quadrangle was completed during March, 1949 by Elgan T. Jenkins, Cartographer. All work was performed in accordance with Field Edit Instructions dated 24 August, 1945 and supplement 1, dated 4 February, 1946.

46 METHODS:

There are no roads within the limits of this quadrangle, such features as structures and contours were checked visually.

Core sound lights #36, 37, 39 and 41 were located by triangulation as were topographic stations Baby 1946 and Wine 1947.

Geographic positions and observing scheme are attached.

47 ADEQUACY OF COMPILATION:

The compilation of the quadrangle was adequate.

48 ACCURACY TESTS:

No accuracy tests were specified. It is believed to comply with the horizontal and vertical accuracy specifications. Several areas were visually examined in this quadrangle, and the contour expression is satisfactory.

4 HORIZONTAL CONTROL:

Forms 526 are being submitted to reconcile any questions on horizontal control.

7 MEAN HIGH WATER LINE:

The M.H.W.L. was checked from approximately one-third of the topographic stations. The distances shown on the pricking cards are correct as of the date of field edit. The maximum change was 4 meters which, considering the nature of the beach, is minor.

18 GEOGRAPHIC NAMES:

One new name came to light during field edit which is shown on the Geographic names print, along with a list of names of reliable nearby residents as references.

*See G.N. list
(Guthrie
hammock)*

A copy of the map compilation was reviewed by Mr Roby Fulcher of Atlantic N. C. Mr Fulcher has been a fisherman in this area for many years and is better qualified to review the map than any other resident contacted. Mr Fulcher could find no errors.

Submitted:
15 April 1949

Elgan T. Jenkins
Elgan T. Jenkins
Cartographer

Approved
20 April 1949.

E. R. McCarthy
E. R. McCarthy
Chief of Party

Review Report T-8746
Topographic
20 October 1949

62. Comparison with Registered Topographic Surveys

T-1017	1866	1:20,000
T-3394	1913	1:20,000
T-8044	1942;45	1:20,000
T-8045	1942;45	1:20,000

This survey (T-8746) unqualifiedly supersedes the above listed surveys for nautical charting. It is the most comprehensive topographic survey available for this area.

63. Comparison with Maps of Other Agencies

None

64. Comparison with Contemporary Hydrographic Surveys

None

65. Comparison with Nautical Charts

420	Jan. 1947	1:40,000
1233	Aug. 1942	1:80,000

See item 7 of field inspection report for information pertaining to the building up of Core Banks on the Atlantic Ocean side.

66. Adequacy of Results and Future Surveys.-Field edit was instructed to obtain geographic positions by field methods for 6 stations located by the radial plot. Subsequent plotting of these positions revealed that the horizontal accuracy of this survey is not questioned.

No vertical accuracy test was run on this survey.

This map fulfills the Ph-5(45) instructions and Bureau policy and complies with the National Standards of Accuracy.

It is noted that due to the nature of the formation of Core Banks, the MHWL on the ocean side and the apparent shoreline on the Core Sound side are constantly changing due to storms and heavy seas common to the area. However, in contrast to other maps of Core Banks to the north, the sea does not course through into the sound at this point and sea action would appear to be less active here.

Reviewed by:

Roscoe J. French
Roscoe J. French

Approved by:

A. V. Griffith
Chief, Review Section *K. H. M.*
Division of Photogrammetry

H. E. Johnston
Chief, Nautical Chart Branch
Division of Charts

O. J. Reading
Chief, Div. of Photogrammetry

W. M. Scaife
Chief, Div. of Coastal Surveys *W. S.*