# 9400



Diag. Cht. No. 1234-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

### DESCRIPTIVE REPORT

Type of Survey Topographic	
Field No. Ph-58 (49) Office No. T-9400	
LOCALITY	
State North Carolina	
General locality Atlantic Coast	
Locality Browns Inlet	
194/ 51	
CHIEF OF PARTY H. F. Garber, Chief of Party H. A. Paton, Baltimore Photogrammetric Off	ce
LIBRARY & ARCHIVES	

8-1870-1 (I

9400

### DATA RECORD

T - 9400

Project No. (II): Ph-58 (49)

Quadrangle Name (IV):

Field Office (II): Holly Ridge, N. C.

Chief of Party:

Harry F. Garber

Photogrammetric Office (III): Baltimore, Maryland

Officer-in-Charge:

Hubert A. Paton

Instructions dated (II) (III): 27 February 1950

28 April 1950, Supplement 1

26 April 1951, Supplement 2

Copy filed in Division of Photogrammetry (IV)

15 May 1951, Supplement 3

Method of Compilation (III): Air Photographic (Multiplex) Planimetry

(Graphic) Contours, see item 34

Manuscript Scale (III): 1:10,000

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

Scale Factor (III): 1.000

Date received in Washington Office (IV): Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV): 21 June, 1955

Publication Scale (IV): 1:24,000

Publication date (IV):

Geographic Datum (III): N.A. 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): EAGLE, 1914

Lat.: 34° 36' 35.088"

Long.: 77° 14' 01.293

Adjusted bloadiostedx

Plane Coordinates (IV):

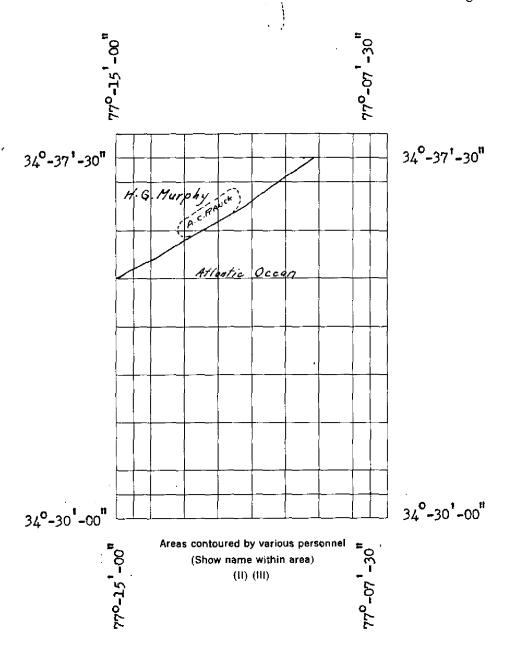
State:

Zone:

X=

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

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



Note: The island between Bear Inlet and Browns Inlet was contoured by multiplex.

### DATA RECORD

Field Inspection by (II): E. T. Jenkins

Date: May, 1950

H. G. Murphy, except as shown under Date: May, 1951 Planetable contouring by (II):

item 34.

H.R.Cravat Completion Surveys by (II):

Feb. 1952 Date:

Manuscript delineated by (III): L. A. Senasack

Mean High Water Location (III) (State date and method of location):
15 November 1949 (Photogrammetric) Except as noted under item

1 December 1949

7 of field inspection report.

T.L.J. March 1950 Date: Projection and Grids ruled by (IV):

Projection and Grids checked by (IV): J.S.B. March 1950 Date:

Bernice Wilson April 1950 Control plotted by (III): Date:

Albert K. Heywood April 1950 Control checked by (III): Date:

REMIEKPOSKor Stereoscopic Date:

June 1950 Albert K. Heywood Control extension by (III):

Albert K. Heywood June 1950 Date: Planimetry

Stereoscopic Instrument compilation (III): KNAMEN Date:

Photogrammetric Office Review by (III): D.M.Brant Date: July 1950

J. A. Clear, Jr. Elevations on Manuscript June, 1951 Date:

checked by (II) (III): Albert C. Rauck, Jr. March 1952

June 1950°

Date:

Camera (kind or source) (III):

			PHOTOGRAPHS (III)		,
Number	Da	te	Time	Scale	Stage of Tide
LEJ-2-152 to 1	54 incl.	11/28/49	1354	1:24,000	0.7' above MLW
LEJ-2-205 to 2	7 "		1338	1:24,000	0.9' above MLW
LEJ-3-3 to 4	11	ù	1314	1:24,000	1.2 above MLW
LEJ-3-62 to 63	II	i	1237	1:24,000	1.4' above MLW

Tide (III) From tables of predicted tides

Reference Station: HAMPTON ROADS, VA. Subordinate Station: New River Inlet

**Subordinate Station:** 

Washington Office Review by (IV): Charles Hanavich

Final Drafting by (IV): John H. Frazier

Drafting verified for reproduction by (IV): 200. Allum

Proof Edit by (IV):

Land Area (Sq. Statute Miles) (III): 6

10 Shoreline (More than 200 meters to opposite shore) (III): 22

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

Control Leveling - Miles (II): Number of Triangulation Stations searched for (II): 11

Number of BMs searched for (II):

Number of Recoverable Photo Stations established (III): 3 None

Number of Temporary Photo Hydro Stations established (III):

Remarks:

\* III Refer to item 3 of field inspection report. Not in agreement.

\*\* III One B.M. reported "lost". Only B.M. data received in compilation office.

Recovered:

Recovered:

Date: & Dec. 1952

Date: 5 Jan 55

Date: 13 Jan 55

Date:

Identified:

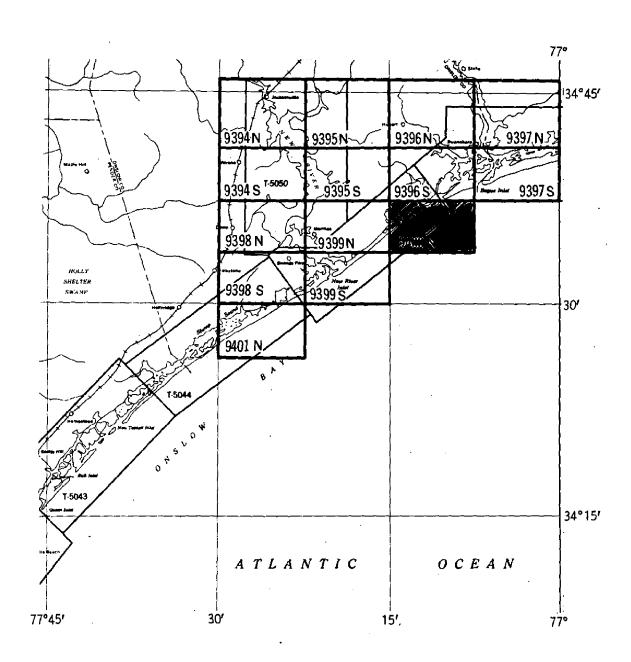
Identified:

### TOPOGRAPHIC MAPPING PROJECT Page 5

PH-58 (49)

### NORTH CAROLINA New River

Scale 1:10,000



Project Ph-58(49), a topographic mapping survey, consists of 8 quadrangles numbered T-9394 to T-9401, inclusive. The area of the project is located in the vicinity of the town of Swansboro and New River, N.C., and extends from the coastline between longitudes 77° 00' and 77° 30' northward to latitude 34° 46'. To the east it junctions with Ph-5(45) - a topographic and shoreline mapping project.

The field operations included complete field inspection and the establishment of some additional horizontal control. Contouring was accomplished by planetable at 5-foot intervals. Compilation of planimetry was done by the multiplex; planetable contours were later applied by graphic methods. The compilation scale was at 1:10,000. Except for T-9400N and T-9401N, each map manuscript is comprised of 2 sheets and is identified as the N (North) or S(South) sheet. Each sheet of the map manuscript - including T-9400N and T-9401N - is 3 3/4' in latitude by 7½' in longitude; the exception to this is in the northern tier of 4 sheets (T-9344N to T-9397N inclusive) which are 4 3/4' in latitude.

For information on other phases of the work concerning the project, such as the project instructions, special reports, official correspondence, and other supplementary information, reference should be made to the project completion report, which will be compiled and submitted upon completion of the review of all the surveys on this project.

These maps are to be published by the Geological Survey at a scale of 1:24,000 as a standard topographic quadrangle. Cloth-backed lithographic prints of the original map manuscripts at compilation scale and the descriptive reports for all maps in this project will be filed in the Bureau Archives. Cloth-backed copies of the published topographic quadrangles will also be filed.

## FIELD INSPECTION REPORT Quadrangle T-9400 Project Ph-58

Harry F. Garber, Chief of Party

### 2. AREAL FIELD INSPECTION

The land area is six square miles and is located in the northwest corner. Of this, about one third is marsh through which the Intracoastal Waterway runs. The ocean fronts a narrow sand island which is used as a bombardment area by the U.S. Marine Corps. This island, known as Browns Island is formed by Browns Inlet on the west and Bear Inlet on the east.

The land area lies within U.S. Marine Corps Reservation, Camp Lejeune. The mainland part is utilized as a firing range area from which practice firing is done toward Browns Island.

Photographic coverage is adequate and the photographs are of good quality.

Field inspection is complete, notes being made on the photographs regarding vegetation, shoreline, etc.

### HORIZONTAL CONTROL

Eleven stations were searched for. Three were recovered and identified.

The eight not recovered were reported as "Lost" on Form 526. They are:

- Bogue Sound Beacon No. 29, 1933
- · Bogue Sound Beacon No. 29B, 1933
- · Brown, 1914
- 'Camp, 1914
- . Camp 2, 1933
- 'Inlet, 1914
- Inlet 2, 1933
- · Pig, 1914

Of these, Camp 2, 1914 was identified for photogrammetric plot control as the monument was found broken off but the base was still in position.

### VERTICAL CONTROL

One U.S. Marine Corps third-order bench mark was recovered. It is Mon. 119 (USMC). From it, contouring was controlled on the mainland; 1.3 miles of fly-levels were run on the beach. These levels originated and were closed on a checked spot elevation in quadrangle T-9399.

### 5. CONTOURS AND DRAINAGE

Contouring was done by standard planetable methods on the 1:10,000 scale photographs.

In accordance with Supplement 3, dated 15, May 1951, of the Project Instructions, Brown's Island was not contoured. This island is an impact area for firing ranges of Camp Lejeune. The Marine Corps officials could not accept responsibility for the safety of personnel and strongly advised against going on the island due to the existence of duds. See side heading 34, paragraph 2.

Browns Island is largely made up of shifting sand dunes.

Drainage as compiled on the planimetric maps was checked against the contoured photographs and corrections made on a film positive of the map manuscript.

### 6. WOODLAND COVER

The high ground is covered with pine, brush and oak, the swamps with deciduous and scattered cypress.

### SHORELINE AND ALONGSHORE FEATURES

Shoreline in the Intracoastal Waterway and adjacent marsh area was inspected from a small boat and classified on the photographs. The high-water line on the ocean side of Browns Island was determined by measuring from identifiable topographic features. At Browns Inlet the high-water line was too changeable to identify and was shown on the photographs as approximate or indefinite.

The the gh-water like was delineated on the map menuserial and the foreshore is sand and shells at the ocean front and mud

and sand in the marsh areas.

### 8. OFFSHORE FEATURES

The low-water line was shown on the ocean side of Browns Island only, as approximate.

### 9. LANDMARKS AND AIDS

There are no landmarks worthy of charting.

Non-floating aids were submitted on Form 567 which covered the project.

### 10. BOUNDARIES, MONUMENTS AND LINES

This subject is covered in a special report for the project.

### 11. OTHER CONTROL

None established.

### 12. OTHER INTERIOR FEATURES

Roads and buildings were classified in accordance with current instructions. There are no bridges.

### 13. GEOGRAPHIC NAMES

Submitted to the Washington Office in a special report in June, 1950.

### 14. SPECIAL REPORTS AND SUPPLEMENTAL DATA

Special project reports were submitted for Boundaries, Geographic Names, Landmarks and Non-floating Aids.

Field Inspection and Field Edit of Planimetry Data were submitted to the Baltimore Photogrammetric Office under Transmittals No. 8, dated 29 April 1950; No. 12, dated 24 May 1950; and No. 21, dated 6 July 1950.

22 June 1951 Submitted by:

William H. Shearouse 479,

Welliam H. Shearow.

Cartographer

13 July 1951 Approved by:

Harry F. Garber Commander, USC&GS Chief of Party

### COMPILATION REPORT

### T-9400

### Photogrammetric Plot Report

Refer to Descriptive Report T-9401 for Photogrammetric Plot Report.

### 31. DELINEATION

Refer to item 22 of Photogrammetric Plot Report, and Field Edit Notes dated 6 July 1950 which is attached to this report.

### 32. CONTROL

See items 3 and 4 of Field Inspection Report and Photogrammetric Plot Report.

### 33. SUPPLEMENTAL DATA

Resevation Boundary Map, Camp LeJeune, N.C., sheet 1 of 2, dated 9 April 1945. This map was used to obtain the horizontal positions of Boundary Markers, and also to supplement field inspection of the boundary line.

Map showing the Right of Way of the Intracoastal Waterway, section II, scale 1:10,000, dated February 1932.

### 34. CONTOURS AND DRAINAGE

Refer to item 5 of Field Inspection Report and Field Completion and Contour Revision Report attached.

The area called Browns Island under item 2 of the field inspection report was contoured by multiplex as per recommendation of the Washington Office. It is not believed that these contours are within the required standard of accuracy but under the adverse conditions of contouring at a 5 foot interval at this manuscript scale, it is believed that the contours presented in this area will at least show the general configuration of sand dunes interspersed with trees.

Drainage, not in agreement with contours, and All intermittent drainage has been removed from the manuscript.

### 35. SHORELINE AND ALONGSHORE DETAILS

Shoreline inspection was adequate. All low water lines and shoal lines are approximate and are delineated from photo examination and field inspection data.

Continuous change in shoreline at Bear Inlet and Browns Inlet are noted on the manuscript.

Refer to item 7 of Field Inspection Report, and item 22 of Photogrammetric Plot Report.

### 36. OFFSHORE DETAILS

None, other than that noted under item 8 of Field Inspection Report.

### 37. LANDMARKS AND AIDS

Refer to item 9 of Field Inspection Report and Field Edit Notes attached.

Form 567 is submitted for three non-floating aids along the Intracoastal Waterway.

### 38. CONTROL FOR FUTURE SURVEYS

Refer to item 11 of Field Inspection Report.

Forms 524 are submitted for three recoverable topographic stations. These will be found listed under item 49 of this report.

### 39. JUNCTIONS

To the south and east is the Atlantic Ocean.

A satisfactory junction is complete: to the north with Survey No. T-9396 to the west with Survey No. T-9399

### 40. HORIZONTAL AND VERTICAL ACCURACY

Refer to Field Completion and Contour Revision Report for this survey attached. The planetable revision surveys are substituted for vertical accuracy tests.

### 41. BOUNDARIES, MONUMENTS, AND LINES

Refer to Boundary Report Ph-58(49)

U.S.M.C. Camp LeJeune boundary markers are plotted on the manuscript. A discrepancy exists between the reported positions of Boundary Markers V thru X inclusive, in U.S.M. C. Publication, pages10-12 and U.S.M.C. Reservation Boundary Map., sheet 1 of 2.

The plotted boundary markers are from positions as given in sheet 1 of the Reservation Boundary Map. The location of these monuments has been noted as approximate of the map measurement.

### 41. BOUNDARIES, MONUMENTS AND LINES (continued)

Refer to letter dated 10 July 1950 attached to Descriptive Report T-9397, concerning right of way of Intracoastal Waterway. These were plotted from azimuths and distances to turning points on centerline.

Right of way is not shown on map manuscript.

42-45

Inapplicable.

### 46. COMPARISON WITH EXISTING MAPS

Comparison was made with the following:

War Department, Corps of Engineers, 15 minute Swansboro quadrangle, dated 1942, scale 1:62,500.

U. S. C. & G. S Air-photo Compilation No. T-5049, Bear Inlet to Alligator Bay, dated 1933, 1934, scale 1:20,000.

The area called Browns Island in the field inspection report is shown on the Swansboro 15 minute quadrangle as two islands separated at Shackle-foot Channel. This is the most prominent of the shoreline and inlet features that are subject to continuous change.

The comparison with the other features on this 15 minute quadrangle and with features on Air-photo Compilation No. T-5049 are in good general agreement.

### 47. COMPARISON WITH NAUTICAL CHARTS

The manuscript was compared with the following USC&GS charts:

Coast Chart No. 1234, scale 1:80,000, published March 1940 (7th edition)(10-3-49)

Harbor Chart No. 833, scale 1:40,000, published June 1946 (2nd edition) (11-22-46)

Comparison with these charts showed good general agreement.

The island noted in item 46 is in good agreement with both charts.

Items to be Applied to Nautical Charts Immediately

Items to be Carried Forward
None.

Approved and forwarded

Respectfully submitted 14 April 1952

Hubert A. Paton, Comdr., C&GS

Officer in Charge

Albert C. Rauck, Jr.

Cartographer

### PHOTOGRAMMETRIC OFFICE REVIEW

T- 9400

1. Projection and grids DMB 2. Title DMB 3. Manuscript numbers DMB 4. Manuscript size DMB
CONTROL STATIONS
5. Horizontal control stations of third-order or higher accuracy <u>DMB</u> 6. Recoverable horizontal stations of less
than third-order accuracy (topographic stations) OMB 7. Photo hydro stations8. Bench marks DMB
9. Plotting of sextant fixes 10. Photogrammetric plot report DNB 11. Detail points DNB
ALONGSHORE AREAS ,
(Nautical Chart Data)
12. Shoreline DMB 13. Low-water line DMB 14. Rocks, shoals, etc. DMB 15. Bridges 16. Aids
to navigation <u>DMB</u> 17. Landmarks <u>DMB</u> 18. Other alongshore physical features <u>DMB</u> 19. Other along-
shore cultural features DMB
PHYSICAL FEATURES
20. Water features <u>DMB</u> 21. Natural ground cover <u>DMB</u> 22. Planetable contours <u>DMB</u> 23. Stereoscopic
instrument contours <u>DMB</u> 24. Contours in general <u>DMB</u> 25. Spot elevations <u>DMB</u> 26. Other physica
features DMB
CULTURAL FEATURES
27. Roads DMB 28. Buildings DMB 29. Railroads 30. Other cultural features DMB
BOUNDARIES
31. Boundary lines DMB 32. Public land lines
MISCELLANEOUS
33. Geographic names <u>OHB</u> 34. Junctions <u>DMB</u> 35. Legibility of the manuscript <u>DMB</u> 36. Discrepancy
overlay DMB 37. Descriptive Report DMB 38. Field inspection photographs 2MB 39, Forms DMB
40. Donald M Brant Jenny Einfor
Reviewer 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.
Catherine a Lipscomh Jamy Cut
/
43. Remarks: Second Field Completion and Contour Revision complete. M.2623-12

Albert Entranchy.

### 48. GEOGRAPHIC NAMES

- Atlantic Ocean
- Banks Channel \*
- Bear Creek
- Bear Inlet
- Browns Creek
- Browns Inlet
- Freeman Creek
- . Intracoastal Waterway \*

N.C. 172

### Onslow County \*\*\*

- Saunders Creek \*\* af W
- . Shacklefoot Channel
- · · SneadsFerry Road
  - · Swansboro Township \*\*\*

\* From U.S.C.& G.S. chart No. 833

\*\* From U.S.C.&:G.S. Planimetric Compilation No. T-5048 and Chart No. 833 \*\*\* From photostat copy of Map of Onslow County, showing townships.

Names underlined in red are approved.
12-5-52. L.Heck

Browns Island (see 8.7)

### 49. NOTES FOR THE HYDROGRAPHER

Three recoverable topographic stations are within this survey. These are non-floating aids to navigation as follows:

New River Daybeacon 59, 1950 Browns Inlet Light 61, 1950 Freeman Creek Daybeacon 63, 1950

### DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

Field edit notes, T-9400

Two observation towers have been recommended to be mapped, but not as Landmarks for Charts. These are features valuable to this particular area, i.e. U. S. M. C., Camp LeJeune.

Field edit information appears on the Discrepancy Print, Field Edit Sheet and field photographs LEJ-2-153, 154 and 205.

No edit of Geographic Names was made. Official names should be taken from special report submitted to Washington 22 June.

Camp LeJeune boundary line does not appear on the Map Manuscript copy. Bdry har been added.

Mean high-water line along the ocean front is stable except at the inlets. There it should be shown as indicated on the photographs.

After application of field edit corrections compilation of planimetry will be adequate.

William H. Shearouse,

Cartographer

Jacksonville, N. C. 6 July 1950

### Field Completion

and

### Contour Revision Report T 9400

The planimetry of this map was field edited in the spring and summer of 1950. This report particularly includes the field edit of contours, drainage and the plannimetric changes occurring subsequent to the field edit of the planimetry.

Methods:

Prior to field work the original field contour photographs were examined. Areas in which the original planetable control appeared to be weak, were examined in the field, either visually or by planetable

The planetable work was done on a double weight photographic print of the map manuscript. All additions and changes that are to be made on the map manuscript have been indicated on this print.

- See side heading 34. No attempt was made to complete the omitted contours on the outer banks. The compiler noted several places for contour completion. These areas are shifting sand dunes and should be shown by symbol.

Geographic Names:

Name Section. by Leographic The geographic name Shacklefoot Channel is recommended instead of Marsh Branch. Local Residents have no knowledge of the name Marsh Branch. Messers. E. B. Yeomans, and Victor Bell, both of R. F. D. Hubert, North Carolina, firmly agree that Shacklefoot Channel is the correct name.

Vertical Accuracy:

The vertical accuracy of this map as corrected on the field edit sheet, complies with National Map Accuracy Requirements, except on Browns Ivland. The confours in this area were obtained by multiplex and have been shown with the approximate Submitted 26 February 1952

> Harland R Cravat Cartographer

Form 567 April 1945

# DEPARTMENT OF COMMERCE

U. S. COAST AND CODETIC SURVEY

# NONFLOATING AIDS OR LANDMARKS FOR CHARTS

OUT ONE	
ATDIKE	, ammin )
CHARTED	CENTORISER
TO BE	東京の東京

Baltimore, Maryland

19 52 April

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

Albert C. Rauck, Jr. The positions given have been checked after listing by

Total Yellet D. Hubert A.

Chief of Party.

CHARTS 777,833 833 833 OFFSHORE CHART INSHORE CHART HARBOR CHART × × 1950 OF = DATE A.I.E.Photo METHOD OF LOCATION AND SURVEY NO. = N.A. 1027 DATUM -D. P. METERS 1052 1216 58.99 919 LONGITUDE 77 13 77 12 POSITION 0 12 D. M. METERS 45.50 299 820 1429 LATITUDE 34 35 3 36 元 34 SIGNAL Black square daymark with yellow border on pile square daymark with yellow border Black Srowns Inlet Lt.61, white pile structure, black tankhouse Freeman Creek Daybn. 63. DESCRIPTION New River Daybn 59. Morth Carolina on pile. CHARTING Dayon STATE 13

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 U. S. GOVERNMENT PRINTING OFFICE: 1949 O - 853418 individual field survey sheets. Information under each column heading should be given.

### 15 May 1951

To: Comdr. Harry F. Garber U. S. Commet and Geodetic Survey P. O. Bex 271 Edenton, North Carolina

Subject: Instructions - Project Ph-58(49) Field, Supplement 3

Reference: Instructions - Project Ph-56(49) Field and Office, dated 27 February 1950

This instruction is to authorize the desistion of planetable contouring of the outer bank in quadrangle 7-9400 between Browns Inlet and Bear Inlet. No attempt will be made to do planetable contouring in the area because of the hazard to personnel and the Marine Corps restrictions.

Approximate contours will be drawn on the multiplex and Kelsh plotter as suggested in your letter of 9 May 1951. The approximate contours will be adequate since the area is limited and consists mostly of send dunes.

(Signed) R.F.A. Studde

Director

### Review Report T-9400 Topographic Map 8 December 1952

### 62. Comparison with Registered Topographic Surveys .-

T-1291	(1872)	1:20,000
	(1927)	1:20,000
	(1933)	1:20,000
T-5049	(1933)	1:20,000
	(1933)	1:20,000
T-6004	(1933)	1:20,000

Except for the Intracoastal Waterway, which is not indicated on some of the older surveys, no radical changes were noted.

For nautical charting purposes the old surveys are superseded by the new map (T-9400).

### 63. Comparison with Maps of Other Agencies .-

Swansboro Quadrangle; AMS, Edition 1948, 1:50,000 H.O. Misc. 15, 042-50-N1; Edition 1948, 1:50,000

The break-through indicated on the Swansboro Quadrangle about midway on Browns Island is closed off an the new map; 20-foot contours an this Island also are not shown on the old quadrangle.

- 64. Comparison with Contemporary Hydrographic Surveys .- None
- 65. Comparison with Nautical Charts .-

Chart No. 833; 21 January 1952, 1:40,000 Chart No. 1234; 27 October 1952; 1:80,000

The location of channels and shallow areas, which were delineated on the map manuscript by the reviewer, differs in some instances from their location on the charts. However, it should be noted that the channels and the shallow areas are subject to change.

66. Adequacy of Results and Future Surveys. - Except for the approximate contours shown on Browns Area (danger area), this map complies with the project instructions and the National Map Accuracy Standards. For instructions authorizing approximate contours on Browns Island refer to Instructions - Supplement 3, dated 15 May 1951.

Reviewed by:

Charles Hanavich

Chief, Review Section Div. of Photogrammetry

Chief, Nautical Chart Div. of Charts

### History of Hydrographic Information T-9400 - North Carolina

Hydrography was applied to the map manuscript in accordance with general specifications of 18 May 1949.

Depth curves and soundings are in feet at MLW and originate with the following surveys and charts:

H-4767 H-4696 NC-833	1:40,000	1927
NC-833	17	1952

Hydrography was compiled by C. Theurer and checked by O. Svendsen.

C. Theurer Feb. 4, 1954