

# 8818N

Diag. Cht. No. 1233 & 1234-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey ..... TOPOGRAPHIC

Field No. .... Office No. T-8818

### LOCALITY

State ..... NORTH CAROLINA

General locality ..... CARTERET COUNTY

Locality ..... CAPE LOOKOUT ✓

1946-'49

### CHIEF OF PARTY

R.J.Sipe, Chief of Field Party

G.E.Morris, Jr., Tampa Photo. Office

### LIBRARY & ARCHIVES

DATE ..... August 2, 1950

# 8818

Form T-1

## DATA RECORD

T- 8818

Quadrangle (II): *TOPOGRAPHIC*

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 Descriptive  
Report No. T- (VI)  
*Division of Photogr. Files*  
*Review Section*

Completed survey received in office:

*18 Nov 1948*Reported to Nautical Chart Section: *25 Nov 1948*Reviewed: *21*  
*16 Dec 1949* Applied to chart No.

Date:

Redrafting Completed:

Registered: *7-13-50*

Published:

Compilation Scale: 1:10,000

Published Scale: *1:24,000*

Scale Factor (III): None

Geographic Datum (III): N.A. 1947

Datum Plane (III): M.S.L.

Reference Station (III): CAPE LOOKOUT, *LIGHTHOUSE,*  
*1933*Lat.: 34° 37' 21."326 (657.1m) Long.: 76° 31' 29".621 (754.6m) Adjusted  
~~Unadjusted~~

State Plane Coordinates (VI):

*NORTH CAROLINA*

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>
16120	5 April, 1946	16:12	1:10,000	-0.2
16121	"	16:13	"	-0.2
16122	"	16:15	"	-0.2
16124	"	16:21	"	-0.2

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. 9-lens 8  $\frac{1}{4}$ " focal length

Field Inspection by: J. S. Howell

date: Feb. 24-26, 1947

Field Edit by: *Elgon T. Jenkins*

date: *30 Mar 1947*

Date of Mean High-Water Line Location (III): 24-26 Feb. 1947

11 Mar. 1947 -(Cape Pt.)

*see page 8*

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

" " " checked by: T.L.J. " " date: 27 Aug. 1947

Control plotted by: R.R. Wagner - J.A. Giles date: 3 Sept. 1947

Control checked by: C.H. Baldwin - M.M. Slavney date: 3 Sept. 1947

Radial Plot by: M.M. Slavney

date: 29 Sept. 1947

Detailed by: C.H. Baldwin

date: 1 Oct. to 24 Oct. 1947

Reviewed in compilation office by: J.A. Giles

date: Oct. 1947

Map Manuscript

Elevations on ~~Field Notes~~

checked by: J.A. Giles

date: Oct. 1947

STATISTICS (III)

Land Area (Sq. Statute Miles): 1.5

Shoreline (More than 200 meters to opposite shore): 10.8 statute miles

Shoreline (Less than 200 meters to opposite shore): 0.25 statute miles

Number of Recoverable Topographic Stations established: 5 8

One has been computed as A MAIO, 1947

Number of Temporary Hydrographic Stations located by radial 0  
plot:

Leveling (to control contours) - miles: 3

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:

## Summary Report to Accompany T-8818 (Topographic)

T-8818 is one of a series of thirty-seven 7.5 minute topographic quadrangles in Ph-5(45). This map is composed of two manuscripts, a N/2 and S/2 both at 1:10,000 scale. The land area mapped on T-8818 falls entirely on the N/2 manuscript.

The area mapped on T-8818 covers the extreme southern tip of Cape Lookout and is composed entirely of shifting sand and sand dunes which are under continual change as a result of wind and sea action from exposure to the Atlantic Ocean. The map is the most southern quadrangle in Ph-5(45), and is the site for Cape Lookout Coast Guard Station and Cape Lookout Lighthouse, the two principal features of interest in the area.

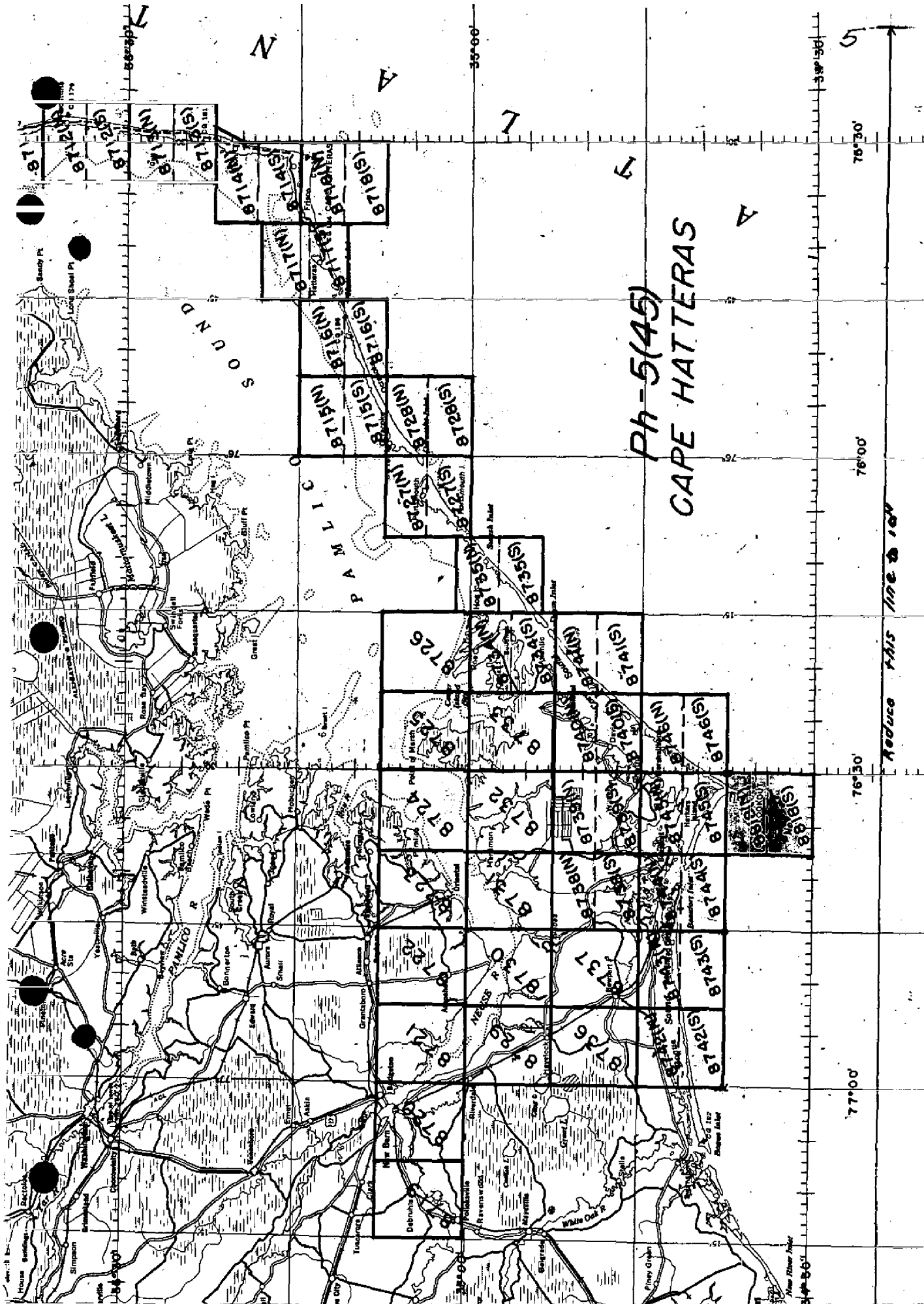
The field work was accomplished in 1947-8 by personnel under the direction of Riley J. Sipe, the office compilation by the Tampa Photogrammetric Office, and the field completion and edit was completed in 1949.

The several mapping operations were:

- a) Nine-lens aerial photography and laboratory processing at 1:10,000 scale.
- b) The field survey included shoreline inspection, recovery and identification of horizontal and vertical control, planetable contouring, clarification of photographic detail, and geographic names investigation.
- c) Compilation by graphic methods.
- d) Preliminary office inspection
- e) Field check and edit of finished manuscript.
- f) Final review of the map manuscript to ensure completeness and conformance with specifications, and to include corrections in accordance with the field completion survey.
- g) Processing:

A 1:20,000 scale glass plate negative will be prepared for transmittal to the Geological Survey.  
(See item 61, Review Report)

T-8818 will be published and distributed by the Geological Survey at 1:24,000 scale as a standard topographic quadrangle in accordance with an agreement of March 25, 1947.



## Summary Report - - - - - Page 2

Data pertaining to T-8818 will be filed and may be obtained as follows:

- a) Filed in the Division of Photogrammetry.
  - 1. T-8818 - 1:10,000 scale map manuscript, field edit and final review corrections applied.
  - 2. Duplicate descriptive report.
  - 3. Form 524, topographic station cards (6).
  - 4. Form 2226-12, pricking cards for photo identification of horizontal control used in the radial line plot. (3)
  - 5. Field edit sheet.
- b) Filed in the Coast and Geodetic Survey Archives.
  - 1. One 1:10,000 scale cloth-backed lithographic print of map manuscript T-8818 and the original descriptive report will be registered.
  - 2. When T-8818 is published a cloth-backed copy of the published map at 1:24,000 scale will be registered.

FIELD INSPECTION REPORT  
T-8818 (34° 30' / 76° 30' / 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, and Supplement 1 to the above, dated 11 December, 1947, except for deviations noted herein.

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

<u>NAME AND TITLE</u>	<u>FIELD WORK</u>	<u>DATES</u>
John S. Howell Topographic Engineer	Horizontal Control Shoreline Inspection Interior Inspection	24 Feb.-26 Feb., 1947
John R. Smith Engineering Aid	Vertical Control Recovery Supplemental Vertical Control	24 Feb., 1947
Robert A. Horn Photogrammetrist	Contouring	12 Mar.-14 Mar., 1947

1. Description of the Area:

The entire land area of this quadrangle lies on the Barrier Beach (Outer Banks) of North Carolina and consists of Cape Lookout, Lookout Bight, and a short length of the Barrier Beach extending northeast from Cape Lookout to include the Cape Lookout Lighthouse. The land is a flat sandy beach that is thickly covered by small sand dunes that extend to an elevation of approximately 25 feet. These dunes are mostly covered by grass which makes them assume some semblance of ~~permanence~~<sup>stability</sup> although those nearest to the high water line are subject to storm water action.

2. Completeness of Field Inspection:

The Field Inspection is felt to be complete and adequate. For further detail of this phase refer to the appropriate paragraph below.

3. Interpretation of the Photographs:

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



#### 4. Horizontal Control:

Five horizontal control stations were searched for or recovered and of these three were pricked direct on the photograph.

#### 5. Vertical Control:

Vertical control consisted of the recovery of existing bench marks and the establishment of supplemental control by the use of the Wye Level.

Seven bench marks were searched for or recovered.

Three fly elevations points were established for the convenience of the contour party by the running of a three mile line of Wye Levels. The error of closure on this line (.45 feet) was adjusted over the entire line and these adjusted elevations were used by the contour party.

#### 6. Contours and Drainage:

All contouring was done on 9-lens 1/10,000 scale photographs to expedite the field work and to give the compilation office a clearer picture of the area. In two particular areas, where there was a multitude of dunes that averaged the same in elevation and shape, a note was made on the photograph explaining the condition as it was not deemed economically practical to contour the individual dunes.

Drainage changes with each storm and there is no definite pattern in any part of the land area.

#### 7. Mean High Water Line:

The field inspection of the shoreline is felt to be complete and adequate.

The entire shore line was driven by jeep; and at appropriate intervals the mean high water line was delineated on the photographs and substantiated by measurements from identifiable topographic detail. At this time it was noted that the eastern beach had built out about 30 meters during the time that had elapsed since photography and that the southern beach had receded a like distance. <sup>(see p. 14)</sup>

A major change at the southeastern tip of Cape Lookout was noted and the MHWL of this newly shaped point was delineated by planetable methods. 3-11-47

#### 8. Low Water Line:

The low water line of the Atlantic Ocean was not determined due to the stage of the tide and condition of the surf at the time of field inspection.

The approximate low water line on the Lookout Bight side of the banks was indicated by the standard symbol and on the photographs

the area that bares at low water appears nearly as light as the dry sand.

9. Wharves and Shoreline Structures:

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

10. Details Offshore from Mean High Water Line:

Details noted offshore from the mean high water line consisted of fixed aids to navigation and a rock jetty.

The fixed aids to navigation are "Lookout Bight Wreck Light" and ~~"Lookout Bight Light #2"~~ <sup>BARDEN ISLET LIGHT #1</sup>. These aids were located by theodolite cuts and the angles are submitted on Form 24A.

The rock jetty noted, projects into the Atlantic Ocean in a southwesterly direction from Lookout Bight. This jetty is awash at MHW, except for the land end, and the offshore end is awash at all stages of tide. The jetty has been delineated on the photographs, and an approximate low water line was shown. The actual low water line and other pertinent detail must be obtained by hydrography.

11. Landmarks and Aids to Navigation:

All necessary information on Landmarks and Aids to Navigation was furnished on Forms #567 and #524.

12. Hydrographic Control:

Topographic stations were located throughout the quadrangle in accordance with the instructions for this project.

No additional hydrographic signal sites were selected.

13. Landing Fields and Aeronautical Aids:

There are no landing fields in this quadrangle.

Aeronautical charts list the Cape Lookout Lighthouse as an Aid to Surface Navigation, and also the Cape Lookout Lighthouse radio beacon is classed as an aid.

14. Roads:

The roads in this area are only sand trails and the trail used is purely up to the driver; however the most used roads are semi-permanent due to the vegetation's tendency to hold the road in place.

One stretch of concrete road was constructed by the U.S. Army as a supply road during World War II and leads from the Army dock almost to the abandoned Army camp. *Now partly in ruins.*  
RJE

15. Bridges:

No bridges exist in this quadrangle.

16. Buildings:

All buildings are clearly discernible on the photographs. With the exception of the U.S. Government installations at the Coast Guard Station and the Lighthouse, the only other buildings are for seasonal use. During the recent war the U.S. Army maintained a camp in this area but it has been abandoned and is fast falling into ruin. All structures in this camp except those of a permanent nature have been deleted. Two concrete gun emplacements with guns in place have been indicated.

17. Boundaries:

The boundary fence of the U.S. Lighthouse is indicated on the photograph but no information regarding the boundary of the U.S. Coast Guard Station could be determined at the station.

18. Geographic Names:

Geographic Names will be the subject of a special report by A.J. Wright, Topographic Engineer. *Filed in the Geographic Names Section, Div. Charts*

Submitted:  
21 March, 1947

*John S. Howell*  
John S. Howell  
Topographic Engineer

Approved:  
March 1947

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

SCALE FACTOR 1 of 1

SCALE FACTOR 1 of 1

[illegible]

DATE 10 July 1947

M-2389-12

12

COMPILATION REPORT  
TO ACCOMPANY  
QUADRANGLE T-8818

26 AND 27 CONTROL AND RADIAL PLOT:

A special report will be prepared and submitted by Milton M. Slavney, Photogrammetric Engineer. *Filed in the Div. of Photogr. General Files.*

28. DELINEATION:

The nine lens photographs used for this quadrangle were clear and of good scale.

The field inspection was good, but there were several discrepancies between the contours and the shoreline inspections between latitudes  $34^{\circ} 36' 10''$  to  $34^{\circ} 36' 30''$  and longitudes  $76^{\circ} 32' 40''$  to  $76^{\circ} 33' 00''$ . These discrepancies have been put on the discrepancy overlay for investigation by the field editor.

*OK'd by field editor R.F.*

29. SUPPLEMENTAL DATA:

None.

30. MEAN HIGH-WATER LINE:

Mean high-water line was delineated according to field inspection. See field inspection report item #7.

31. LOW-WATER AND SHOAL LINES:

Low-water and shoal lines were shown according to field inspection. See field inspection report item #8.

32. DETAILS OFFSHORE FROM HIGH-WATER LINE.

See field inspection report item No. 10 and item No. 45 of this report.

33. WHARVES AND SHORELINE STRUCTURES:

All wharves and shoreline structures have been delineated on the map manuscript according to instructions.

34. LANDMARKS AND AIDS TO NAVIGATION:

All landmarks and aids to navigation have been shown according to instructions. One new landmark, Topographic Station "TOWER 1947", was recommended by the field party and two landmarks recovered. Two nonfloating aids to navigation were recommended.

35. HYDROGRAPHIC CONTROL:

Hydrographic station 8801 is "LOOKOUT BIGHT WRECK LIGHT", and hydrographic station 8802 is "LOOKOUT BIGHT LIGHT 2", (See 34).

36. LANDING FIELDS AND AERONAUTICAL AIDS:

See field inspection report item No. 13.

37. POLITICAL BOUNDARIES:

No political boundary information has been received by the Tampa Office as of 28 October, 1947. *All land falls in Carteret County, N.C. Portsmouth Twp. (per map Feb. 7, 1949.)*

38. GEOGRAPHIC NAMES:

All geographic names have been shown according to the geographic name sheet received from the Washington Office. *See attached list of approved names.*

44. COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES:

None available for comparison.

45. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with Nautical Chart No. 1234 bearing a print date 2 November 1946. The only major difference is the large change in shoreline at the southern end of Cape Lookout. Some wrecks in Lookout Bight were neither recovered nor deleted by field inspector so an investigation is being requested of the field editor.

Respectfully submitted,

*C. H. Baldwin*

C. H. Baldwin  
Engineering Draftsman

Approved and forwarded:

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

FIELD EDIT REPORT  
 Quadrangle T-8818  
 34°-30.0-76°-30.0/17.5  
 Project ph-5(45)

E. R. McCarthy, Chief of Party

The field edit of this quadrangle was completed during the month of 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:

All features within the limits of this quadrangle were checked visually. A sextant, hand level and tape were used to determine the heights of landmarks.

The majority of the questions brought to the Field Editors attention on the discrepancy print have been answered thereon. The balance are answered on the photographs.

47 ADEQUACY OF THE COMPILATION:

The compilation of this quadrangle was adequate considering the extent of the field inspection.

The interpretation by the field inspector is better than that of the compiler in the vicinity of 34-36.4/76-32.7. This is NOT a pond. The area in question is one to three feet below the level of the beach and is covered with a black sandy silt. A storm tide probably fills the depression either by wash over the beach or by seepage and the area probably empties itself when the tide goes down either by overflow and/or seepage. (see item #6 under Notes to Compiler).

*Resolved on manuscript OK.  
 E.R.*

48 ACCURACY TESTS:

There were no accuracy tests specified for this quadrangle, the work is believed to comply with the horizontal and vertical accuracy specifications. Several points were visually examined during field edit. The contours adequately express the ground relief in the areas examined.

10. DETAILS OFFSHORE FROM THE HIGH WATER LINE:

The nautical charts of this area (420-1233-1234) show a "stranded wreck" symbol in 34-37.0/76-31.9 and a second wreck in 34-370/76-32.6.

A visual check indicated that they no longer show above water. Local information discloses that remains are still existant below the surface.

It is recommended that until such time as a hydrographic examination may be feasible both wrecks be shown by a "sunken wreck" symbol.

#### 14. ROAD CLASSIFICATION:

All roads in this quadrangle should be shown as sevens, there is one small section of single lane concrete road but it is being broken up by storm tides. All other roads in this quadrangle have little permanency, for with each small storm the existing roads are usually covered with sand and a new road or trail is then found and traveled by the one or two vehicles there <sup>are</sup> in this quadrangle. It is suggested that due to the non-permanency of these roads that they be mapped as of the date of field inspection.

#### 49. MISCELLANEOUS:

This sheet was reviewed by Mr. McKinley Lewis, a resident of Harker's Island for forty years. He has fished in the vicinity of Cape Lookout for 25 years. He could find no errors in the compilation.

Submitted:  
30 March, 1949

*Elgan T. Jenkins*  
Elgan T. Jenkins  
Cartographer

Approved:  
7 April, 1949

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



~~180506Z CHARRS~~  
TO BE DELETED

**STRIKE OUT ONE**

**Morehead City, N. C.**

25 February. 19 47

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

The positions given have been checked after listing by

**John S. Howell, Topo. Engr.**

[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

"This copy for Coast Pilot"  
 D. [redacted] to: Harstad, Chit.  
 1-20-47 Davis

**TO BE CHARTED**  
**~~TO BE REJECTED~~**

**STRIKE OUT ONE**

## NONFLOATING AIDS TO NAVIGATION FOR CHARTS

**Morehead City, N.C.**

1047

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

The positions given have been checked after listing by

**Charles H. Baldwin**

Tampa Photogrametric Office

**Alley J. Sizemore**

Chief of Party.

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *not by 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.

55  
"This copy for Coast" <sup>the</sup> ~~is~~   
Original to Nautical Charts  
11-20-47 Damm

**TO BE CHARTED  
FOR RECOGNITION**

NONFLUENT/EXTINGUISH/AMBS/OR/ LANDMARKS FOR CHARTS

**STRIKE OUT ONE**

Morehead City, N.C. 25 February 1947

I recommend that the following objects which ~~have~~ *(have not)* been inspected from seaward to determine their value as landmarks, be charted on ~~(1857, 1860, 1874)~~ the charts indicated.

The positions given have been checked after listing by

**John S. Howell, Topo. Engr.**

**Charles R. Baldwin, Photo-Aid**

Charles H. Baldwin, Photo. Aid.

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.

# GEOGRAPHIC NAMES

Survey No.

T-8818

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	19
A	B	C	D	E	F	G	H	K	
✓ Atlantic Ocean*	o								1
✓ Cape Lookbht	o								2
✓ Cape Pt.	o								3
✓ Cape Shore	o								4
✓ Cape Lookout	o (village)								5
✓ Lookout Bight	o								6
✓ Wreck Pt.	o								7
Straits Twp.	o								8
Portsmouth Twp.	o								9
North Carolina*	o								10
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\* - Decis BGN

o - Approved name

12-19-19

A.J.W.

Review Report T-8818  
Topographic Map  
21 December 1949

61.-General Statement: Only one 1:10,000 scale manuscript (the N/2) complete with planimetry and contours, was compiled on T-8818. A S/2 was ruled on the projection ruling machine and matched with the N/2 for the preparation of the glass negative at 1:20,000 for the Geological Survey.

62.-Comparison with Registered Topographic Surveys:

T-416	1:20,000	1853
T-1695	1:20,000	1886
T-4346	1:20,000	1926-27
T-43462	1:10,000	1928
T-6841	1:10,000	1943 Planetable topo.
T-8045	1:10,000	1945 Air photo compilation.

T-8045 was made without benefit of any field inspection or recovery work whatever for use in nautical chart constructions only, and was not published. T-8045 is necessarily incomplete for every charting detail, and is superseded by T-8818.

Due to the continual change in this area the shoreline has changed considerably over the years. Topographic station HAST, 1947 near Cape Lookbht Lighthouse cuts in at a slightly different position than the same station (FIX, 1943) on T-6841. Strong cuts from good images were made from three photographs, and the location on T-8818 is considered the better position of the two.

The inshore end of the rock jetty is not discernible on these photographs and could not be shown since it is covered completely with sand.

The above listed surveys are completely superseded by this manuscript T-8818.

63.-Comparison with Maps of other Agencies:

None

64.-Comparison with Contemporary Hydrographic Surveys:

None

65.-Comparison with Nautical Charts:

1001	1:1,191,000	1948
1110	1:1,113,000	1943
420	{ 1:20,000	8/8/49
	{ 1:40,000	

See item 10 of the Field Inspection Report concerning the delineation of the MHWL on Cape Pt. and the building up of the beach by 30 meters on the Atlantic Ocean side of the Cape.

A discussion concerning the wrecks shown on 420 is made in item 10 in the field edit report.

No disposition is made of the landmark House (W. GAB) just south of the Lighthouse on Core Banks. The house is still there and plots in the same position, and is presumably the same house.

66.-Adequacy of Results and Future Surveys:

No vertical or horizontal accuracy tests were made for this survey. The nature of the area is mostly sand subject to weather action constantly, and doubtless the MHWL has changed since the field inspection and the date of the photographs.

However, this survey, T-8812, fullfills the project instructions and Bureau policy and complies with the National Standards of Accuracy.

It supersedes all other surveys covering <sup>the</sup> common area and should be used for new nautical chart construction.

Reviewed by:

Roscoe J. French  
Roscoe J. French

Approved by:

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

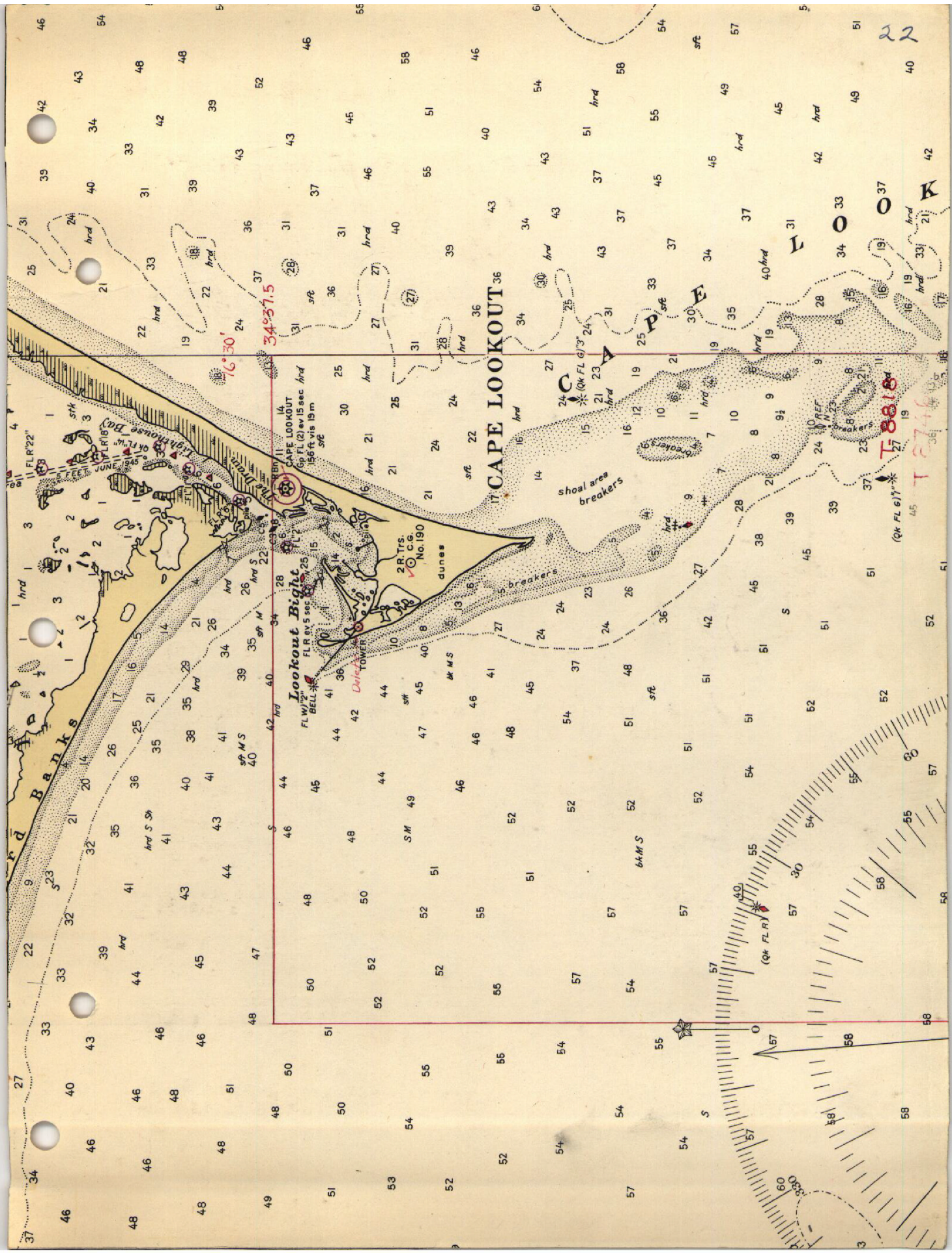
J. Madmon-Tow  
Chief, Nautical Chart Branch  
Division of Charts

O. S. Reading *AM*  
Chief, Division of Photogrammetry

W. M. Scife

Chief, Div. of Coastal Surveys





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