

# 8714 N&S

diag'd. on diag. Ch. No. — 1232

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-8714

#### LOCALITY

State North Carolina

General locality Dare County

Locality Hatteras Banks - Avon - Buxton

1946-48

#### CHIEF OF PARTY

R. J. Sipe

#### LIBRARY & ARCHIVES

DATE \_\_\_\_\_

B-1870-1 (1)

# 8714 N&S

## DATA RECORD

T- 8714

Quadrangle (II):

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

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

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

Instructions dated (II III): Undated

office files of the  
 Copy filed in Descriptive—  
 Report No. T- (VI)  
 Division of Photogrammetry

Completed survey received in office: 10/13/47

Reported to Nautical Chart Section: 10/20/47

Reviewed: 10/27/48

Partially applied to Chart # 1232 3-9-48  
 Applied to chart No. Date:

Redrafting Completed:

Registered: <sup>Prelim.</sup> 11/17/48

Published:

Compilation Scale: 1: 10,000

Published Scale: 1: 24,000

Scale Factor (III): None

Geographic Datum (III): N.A. 1927

Datum Plane (III): MSL

Reference Station (III): Cape Hatteras Light, 1938

Lat.: 35° 15' 52.976(1632.6m) Long.: 75° 32' 30.230(764.1m)

Adjusted  
~~Unadjusted~~

State Plane Coordinates (VI): ~~Not available~~

X = ~~3,032,092.09'~~  
 3,032,093.09

Y = ~~569,233.46'~~  
 569,233.46

Military Grid Zone (VI)



PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
16062	6 Apr. '46	13:15	1:10,000	1.7'
16063	"	"	"	"
16064	"	"	"	"
16065	"	13:30	"	1.4'
16066	"	13:30	"	"
16067	"	13:30	"	"
16076	7 Apr. '46	08:53	"	Negligable Tide
16077	"	"	"	Negligable Tide
16078	"	"	"	"
16081	"	"	"	" (Pamlico Sound)
16082	"	"	"	" (Pamlico Sound)

Tide from (III): Ref. Sta. Hampton Roads, Sub. Station Cape Hatteras

Mean Range: 3.6'

Spring Range: 4.3'

Camera: (Kind or source) 9 Lens USC&GS 8.25" focal length

Field Inspection by: S.J. Hathorn - I.Y. Fitzgerald date: 2 Jan. thru  
B.O. Bryant - D.G. Flippo 14 Feb. 1947  
E.L. Williams

Field Edit by: J.K. Wilson date: 25 June 1948

Date of Mean High-Water Line Location (III):  
8 January - 20 January 1947

Projection and Grids ruled by (III) T.L.J. date: 16 April 1947

" " " checked by: T.L.J. date: 16 April 1947

Control plotted by: W.H. Shearouse date: 29 April 1947

Control checked by: W.W. Dawsey date: 29 April 1947

Radial Plot by: M.M. Slavney date: 2 July 1947

Detailed by: I.I. Saperstein date: 28 July 1947  
15 September 1947

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

Elevations on <sup>Map Manuscript</sup> ~~Field Edit Sheet~~  
checked by: J. A. Giles date: Sept. 1947

STATISTICS (III)

Land Area (Sq. Statute Miles): 13.3

Shoreline (More than 200 meters to opposite shore): 28.7

Shoreline (Less than 200 meters to opposite shore): 6.9

Number of Recoverable Topographic Stations established: 15

Number of Temporary Hydrographic Stations located by radial plot: 0

Leveling (to control contours) - miles: 8.5

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. 8714 PROJECT NO. PH 5 (45) SCALE OF MAP 1:10,000 SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR $\nu$ -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
Big Kinnakeet C.G. Tower 1938	G.P. pp. 581	N.A. 1927	35° 19' 08.643	75° 30' 42.530				266.4 (1582.7)		
Muddy Slue Light, 1938	G.P. pp. 581	"	35° 19' 02.507	75° 36' 43.332				1074.3 (441.3)		
Pipe Station B-2	C.E. 503	"	35° 19' 49.991	75° 30' 31.436				77.3 (1771.8)		Destroyed
Pipe Station C-1	C.E. 506	"	35° 22' 28.114	75° 29' 53.676				1094.6 (421.0)		
Big Kinnakeet C.G. Flagpole 1938	G.Ps. p. 581	"	35° 19' 10.91	75° 30' 41.84				1540.6 (308.5)		
Big Kinnakeet C.G. Chimney 1938	G.Ps. pp. 581	"	35° 19' 09.84	75° 30' 43.68				794.0 (721.4)		
Pipe Station B-1	C.E. 502	"	35° 19' 35.758	75° 30' 33.455				866.4 (982.7)		
Sub. Station B-1	Pos. Comp.	"	35° 19' 05.810	75° 30' 40.644				1354.9 (159.6)		
Sub. Station - #1 of C-1	"	"	35° 22' 02.523	75° 30' 00.064				336.2 (1512.8)		
Sub. Station - #2 of C-1	"	"	35° 20' 33.806	75° 30' 23.520				1056.8 (458.8)		
Cape Hatteras Light, 1938	G.P. pp. 582	"	35° 15' 52.976	75° 32' 30.230				303.2 (1545.8)		
North Point Light, 1938	G.P. pp. 581	"	35° 18' 30.548	75° 37' 26.372				1103.3 (412.3)		
								1102.0 (747.1)		
								845.0 (670.4)		
								179.1 (1670.0)		
								1026.7 (488.9)		
								77.8 (1771.3)		
								1.6 (1513.1)		
								1041.8 (807.3)		
								593.9 (921.2)		
								1632.6 (216.4)		
								764.1 (752.4)		
								941.4 (907.6)		
								666.2 (849.5)		

1 FT. - 3048006 METER  
COMPUTED BY: W.H. Shearouse  
CHECKED BY: R. Dossett  
DATE 19 March, 1947  
DATE 26 March, 1947  
M. 2388.12



MAP T-8714..

PROJECT NO.....FH 5 (15)

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

SCALE FACTOR.

STATION

[illegible]

11 FT. x .9048006 METER  
COMPUTED BY: W. H. Shearouse

DATE 19 March 1947

CHECKED BY: R. Dossett

DATE 26 March, 1947 <sup>12398.12</sup>



Statement to Accompany Descriptive Report

1. T-8714 is composed of two complete topographic map manuscripts as follows:  
T-8714 N/2 scale 1/10,000      T-8714 S/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, plane-table contouring, 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 T-8714 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. T-8714 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 T-8714 will be filed and may be obtained as follows:
  - (a) Filed in the Division of Photogrammetry
    - (1) T-8714 N and S, scale 1:10,000, map manuscripts, field edit and final review corrections applied.
  - (b) Filed in Coast and Geodetic Survey Archives
    - (1) Descriptive Report
    - (2) 1:10,000 scale, cloth mounted photo print of map manuscript T-8714 N/2 (Advance print)
    - (3) 1:10,000 scale, cloth mounted photo print of map manuscript. T-8714 S/2 (Advance print)

- (4) The above prints are to be ~~permanently~~ registered under one number, T-8714, and when T-8714 is published a cloth backed copy of the published map will also be registered.

1:10,000 manuscript scale,  
A cloth-backed lithographic print will replace the advance photographic print.

Date Oct 27 1948

B. Thomas Hynson  
B. Thomas Hynson  
Cartographer, Photogrammetrist



FIELD INSPECTION REPORT  
T-8714 (35° 22'.5/75° 34' /7.5')  
Project Ph-5 (45)  
Sub-project A

Riley J. Sipe, Chief of Party

All phases of field work was completed in accordance with the Director's Instructions, Project Ph-5 (45), Field; and Instructions-Project Ph-5 (45) - Field, Supplement 1, dated 11 December, 1946, except for deviations herein noted. Filed in Div. of Photogrammetry Office Files.

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

<u>NAME AND TITLE</u>	<u>FIELD WORK</u>	<u>1947 DATES</u>
S. J. Hathorn Photogrammetrist	Horizontal Control Recovery	2 Jan - 9 Jan. 1947
I. Y. Fitzgerald Photo. Aid	Shoreline Inspection	8 Jan - 20 Jan. 1947
B. O. Bryant Photo. Aid	Fly Levels, Contours, & Interior Inspection	7 Jan - 9 Jan. 1947
D. G. Flippo Photo. Aid	Contours & Interior Inspection	16 Jan - 14 Feb. 1947
E. L. Williams Engr. Aid	Contours & Interior Inspection	16 Jan - 14 Feb. 1947

1. Description of the Area:

The land area comprises approximately one-fifth of the total area for the quadrangle. The land area falls into two naturally distinct areas.

Buxton Woods: This includes the area in the southern part of the quadrangle, bounded on the north by Pamlico Sound and on the east by an imaginary line that is a continuation of the sound shoreline from the north of the narrow Barrier Beach.

The terrain is varied, consisting principally of low ridges (running east and west) separated by marshes. Pine is the predominating growth on the ridges with hardwood and a very heavy growth of under-brush appearing along the edges of the marshes.

The woods are thickly populated along the main sand roads in the vicinity of Buxton and scattered dwellings are along the Hatteras Road west of Buxton.

Fishing is the chief occupation of the people living in and around Buxton.

Barrier Beach: This includes the narrow beach area that is bounded on the east by the Atlantic Ocean and on the west by Pamlico Sound and the Buxton woods.

The area is generally low and flat except for low dunes scattered along the beach. A sand barrier, sections of which were man-made, parallels the ocean in the southern part of the quadrangle. Two parallel dikes, that tie into the sand barrier on the east, cross the narrowest portion of the barrier beach approximately two miles north of the Cape Hatteras Lighthouse.

The vegetation is largely grass with some live oak trees growing around Avon. The vegetation holds along the sound side and meets the beach area in the approximate center of the island.

The only dwellings are in the northern part of the area, and along Pamlico Sound.

2. Completeness of Field Inspection:

Field inspection is believed to be complete and adequate.

3. Interpretation of Photographs:

Photographic detail was sufficiently clear for interior inspection and no significant changes since photography were encountered.

However, the Atlantic shoreline had changed since photography and it was necessary to determine the MHWL by direct measurements from identifiable topographic features; and where this method was impractical planetable methods were used to delineate the MHWL.

4. Horizontal Control:

Control stations were located opposite the required photograph centers as instructed using the substitute station method except on photograph #16066. On this photograph, the Cape Hatteras Light was identified, an option allowed in the instructions. In the SE corner of the quadrangle, one triangulation station (Cape Hatteras Lighthouse) was identified.



Big Kinnakeet Coast Guard Tower was identified to supplement the required minimum control.

5. Vertical Control:

Vertical control consisted of recovery and identification of two bench marks, and the location of temporary bench marks for use in contouring.

The temporary bench marks were of 4th order accuracy and were established with wye level along the main sand road. The 0.74 error of closure was prorated along the six-mile line of levels.

The following U.S.C. & G.S. tidal bench marks were not searched for. It was unintentional that these bench marks were not searched for and the mistake was not discovered until after the field party had left the area.

- (a) Tidal B.M. 2 (1917) - Buxton, Pamlico Sound).
- (b) Tidal B.M. 3 (1917) - Buxton, Pamlico Sound).
- (c) Tidal B.M. 1 (1921) - Cape Hatteras Lighthouse.
- (d) Tidal B.M. 2 (1921) - Cape Hatteras Lighthouse.
- (e) Tidal B.M. 3 (1921) - Cape Hatteras Lighthouse.
- (f) Tidal B.M. 4 (1921) - Cape Hatteras Lighthouse.

Reference:  
Comdr. Sipe's letter  
dated 18 June 1947.  
w.a.g.

Filed in the  
Div of Photg  
office files

The other bench mark identified in the quadrangle was established by the U. S. Dept. of Interior, National Park Service. The adjusted elevation for this bench mark was furnished by the U.S.C. & G.S. Washington Office on a base line traverse showing all bench marks established along the Outer Banks by the U.S.D.I., N. P. S.

6. Contours and drainage:

The Barrier Bench area had been previously contoured by the U. S. Geological Survey, therefore, it was necessary to contour only the Buxton Woods area and to attempt a reasonable juncture between the two areas.

Enough shots along the junction line were taken to get the most feasible juncture under the changing conditions (shifting sands).

It was almost impossible to identify topographic detail in the woods and marshes. Identification difficulty and thick underbrush dictated the method of contouring, running planetable traverses along the ridges, and using hand level shots to the sides to determine elevations over to the marsh line.

There is no definite drainage pattern in the area.

7. Mean High Water Line:

The entire ocean shoreline was inspected by Jeep and where necessary, measurements were taken from identifiable topographic detail to the MHWL and noted on the photographs.

The shoreline along Pamlico Sound, which is almost entirely



apparent shoreline, was inspected by Jeep and walking of the shoreline.

There is no perceptible periodic tide in Pamlico Sound, and inspection proved that the MHWL is correct as photographed.

8. Low Water Line:

It was not practical to determine the mean low water line along the open beach.

Along the sound, the mean low water line is almost synonymous with the MHWL, especially where the shoreline appears as apparent on the photographs.

9. Wharves and Shoreline Structures:

The only detail in the quadrangle was a boat basin under construction at Avon. The basin is to be located on the map compilation by the field edit party. See page 2 of Field Edit Report

10. Details Offshore from the High Water Line:

All detail from the shoreline except a spoil bank in the vicinity of Avon is discernible on the photographs and have been labeled. The spoil bank is to be located along with nine non-floating aids (Par. 11) by the field edit party. Done.

11. Landmarks and Aids to Navigation:

All existing landmarks have been pricked and labeled on the photographs, and Form #567 submitted. Deletions and changes have also been reported on Form #567.

Muddy Slue Light and North Point Light were located by sextant fixes.

Non-floating aids for a new channel being dredged near Avon are to be located (planetable method suggested) on the map compilation by the field edit party. (An ozalid print prepared by the U. S. Engineers for the proposed channel is being forwarded with the descriptive report for the information of the field edit party) *Filed in the Div of Photg filca*

12. Hydrographic Control:

Topographic stations were located through the quadrangle in accordance with instructions.

13. Landing Fields and Aeronautical Aids:

There are no landing fields in the area.

The Cape Hatteras Light is listed as an aeronautical aid.

14. Road Classification:



There are no graded roads in the quadrangle. However, the sand trails in the area are suitable for all-weather use, but are certainly not conducive to even moderate speed.

When the tide is low, most of the vehicles traveling north from Buxton use the beach.

At the date of this inspection, the State Highway Department was working on a location survey from Hatteras to Avon preparatory to future plans for hard-surfacing the new route.

15. Bridges:

No comment necessary.

16. Buildings and Structures:

Adequately covered on photographs.

17. Boundary Monuments and Lines:

Boundary monuments and lines were investigated in the field and will be the subject of a special report by Mr. A. J. Wraight, Topographic Engineer.

Filed in the  
Div of Photog  
files

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 Geo.  
Names Sec.  
Div of Charts

Submitted:  
26 March, 1947

Stanley J. Hathorn  
Stanley J. Hathorn by G.E.V.  
Photogrammetrist

Approved:  
31 March, 1947

Riley J. Sipe  
Riley J. Sipe  
Chief of Party



COMPILATION REPORT  
TO ACCOMPANY  
QUADRANGLE NO. T-8714

26 AND 27 CONTROL AND RADIAL PLOT:

A special report which included the N/2 of this quadrangle was submitted to the Washington Office by Milton M. Slavney, Photogrammetric Engineer, on 5 August, 1947. A ssimilar report will be submitted in the immediate future covering the S/2. Filed in the Div of Phtgg files

28 DELINEATION:

"BIG KINNAKEET C.G. CHIMNEY, 1938", a triangulation station was apparently recovered since a copy of Form No 526 stating that it was recovered as described" was submitted for it. It was not pricked on the field photograph nor was there a pricking card submitted. The building identified in this office is next to the "C.G. Tower" and is the only building in the vicinity. It can be seen very plainly on the photographs and was delineated in its true position on the map manuscript. The plotted position of "BIG KINNAKEET C.G CHIMNEY, 1938"; however, is 10 meters west of the building. Further investigation should be made to determine the authenticity of the triangulation station recovered since the property is privately owned and may have undergone changes. See Field Edit + Review Report.

The photographs were generally of good scale.

Additional detail points were cut in especially in the Buxton Woods area, to control the contours.

In the compilers opinion the field inspection was not quite adequate for delineation, especially in the north half of the quadrangle.

Public buildings were not circled, except the Post Offices and a few churches, nor were private buildings marked for deletion on the photographs. All buildings visible on the photographs were delineated on the map manuscript and should be checked by the field edit party.

Ditches were not labeled on the photographs; especially those falling within the limits of the north half of the quadrangle.

A brush symbol on one photograph and a marsh symbol on another photograph were used to designate the same area by the field inspector, casting doubt on the other areas labeled brush. A comparison with the U.S. G.S. planetable sheet shows the area as marsh with a few high spots.



Under the stereoscope these high spots appear to be brush, or sand and brush, or sand and grass, and were so shown on the map manuscript. However further investigation should be made by the field edit party.

The field inspection report states that the U.S. Coast Guard telephone line was delineated on the photographs. The only evidence of this that could be found were pricked points surrounded by penciled squares. It is uncertain whether these points indicate the telephone line's position or not and these should be verified or repricked by the field edit party. A portion of the telephone line was shown on the map manuscript in the south half of the quadrangle in the only area marked by the field inspector for this purpose.

The contours were drawn from the U.S. G.S. planetable sheets from Latitude  $35^{\circ} 22' 30''$  to Latitude  $35^{\circ} 16'$  except at Buxton. The projection could be held in very few instances, the contours being transferred by holding the planimetry.

Contours along the ocean shore could not be drawn <sup>as shown</sup> on the U.S. G.S. sheet, because of the change in the shoreline they fell offshore.

The following method was used to delineate the contours along the ocean shore.

The photographs were placed under the stereoscope and a line drawn along the highest sand ridge and marked with a ten foot contour, to conform most closely to the U.S. G.S. sheet. A five foot contour was drawn along the mean high water line as shown on the U.S. G.S. sheet. The depression contour between the five and ten foot contours, as shown in certain areas on the U.S. G.S. sheet were omitted; however, a slight depression exists between the five and ten foot contours, but the depth could not be determined in this office. Further investigation should be made by the field edit party.

The remainder of the quadrangle was contoured by the field party.

The contour junction was made with the U.S. G.S. planetable sheet by the field party with one exception. A ten foot contour was shown on field photograph 16066 which did not appear on the U.S. G.S. planetable sheet. The contour was completed in the office stereoscopically.



Refer to (1): Instructions - Project Ph-5(45) - Field

Supplement 2.

(2) Lieutenant Commander George E. Morris, Jr.  
letter dated 3 July 1947, Project Ph-5(45)  
Contouring T-8711 to T-8714.

(3) Letter from Director dated 18 July 1947 711-rs.

All three records may be found in descriptive report for T-8711.

Proper care was not taken to use the photograph with the center chamber nearest the area being worked. Contouring was done on photograph 16082, with some contours being 210mm from the center chamber. Due to scale difference and a small amount of tilt in this photograph, difficulty was encountered in delineating the contours. The contours, in part, were transferred to photograph 16076 stereoscopically, and by the projector method.

If field photograph 16076 had been used for contouring this area, practically all contours would have fallen within the center chamber. Both the topographer and compiler should have had less difficulty doing their work and the contours could have been more accurately shown.

In numerous instances the topographer did not show every contour. For instance, a 56 foot elevation was shown immediately over a 40 foot contour. It is realized by the compiler that sufficient space was lacking at the tops to show every contour; however a check should be made by the field edit party to ascertain if these elevations on the tops are correct. No information on this by Field Edit.

29. SUPPLEMENTAL DATA:

1. U.S.G.S. planetable sheets dated 1939.
- \*2. "Channel from Pamlico Sound to Avon, North Carolina", surveyed September - October, 1946.
3. National Park Service, Positions and Elevations of Bench Marks.
4. Dare County, North Carolina, Public Roads Administration, 1938.

\* Also filed in Nautical Chart Bk., Div. of Charts.

This would  
make excellent  
material for  
a special  
Report, but  
please don't  
include in  
a descriptive  
report  
HPL

Filed in the  
Div of Photog  
files



30. MEAN HIGH-WATER LINE:

The mean high-water line was delineated on the field prints inconsistently in that the mean high-water line was drawn on different visible lines on the various photographs.

It is realized that the shoreline has changed between the time the photographs were taken and the time of field inspection.

The mean high-water line has been delineated on the map manuscript according to the field inspectors notes. The foregoing discrepancies<sup>are</sup> being noted for investigation by the field editor.

31. LOW-WATER AND SHOAL LINES:

Not shown on map manuscript. See paragraph 8 of the Field Inspection Report.

32. DETAILS OFFSHORE FROM THE HIGH-WATER LINE:

Three offshore structures shown on chart No. 1232 were not shown on the photographs, or any mention made of them in the field report. The field edit party should determine if these structures are still in existence. The charted name and approximate positions are:

1. Hunting House: Latitude  $35^{\circ} 21.2'$   
Longitude  $75^{\circ} 33.3'$
2. Structure west of Avon in Pamlico Sound (no charted name):  
Latitude  $35^{\circ} 21'$  Longitude  $75^{\circ} 31.1'$
3. Icehouse: Latitude  $35^{\circ} 18.4'$  Longitude  $75^{\circ} 33.9'$

See paragraph 10 of the Field Inspection Report.

33. WHARVES AND SHORELINE STRUCTURE:

See paragraph 9 of the Field Inspection Report.

34. LANDMARKS AND AIDS TO NAVIGATION:

Six landmarks have been recommended for charting and one for deletion.

Rec. Topo. Stations: 524 cards on file in Div. of  
Photogrammetry General Files

Muddy Shoe Light, 1948

Spire, 1946

Gable, 1947

Chimney, 1948

Tower, 1947

Tank, 1947

Shack "

Issac 1946

July, 1947

Rang "

Circle (USE), 1946

Sign, 1947

Made, 1946

Leon, 1946

Test, "

Foot "

Buxf 1947



Sextant fixes were taken at North Point Light and Muddy Slue Light, both of which are triangulation stations established in 1938.

North Point Light fell on the plotted position. Muddy Slue Light, however, fell about 160m east of the plotted position. According to the 1947 IntraCoastal waterway Light List Muddy Slue Light has not been rebuilt since 1934. Planetable cuts should be made by field edit party to check present position. See Field Edit Report

There appears on the photographs a very tall, skeletal tower about 525 meters southwest of the old Cape Hatteras Lighthouse. This tower was neither recovered nor deleted during the field inspection but has been plotted on the map manuscript by radial line intersections after office identification and should be further investigated by the field edit party. If still extant this tower should be visible for a considerable distance. It also constitutes an hazard to aviation. See par. 34 of Review Report.

35. HYDROGRAPHIC CONTROL:

See paragraph No. 12 of the Field Inspection Report.

36. LANDING FIELDS AND AERONAUTICAL AIDS:

See paragraph 13 of Field Inspection Report.

37. GEOGRAPHIC NAMES:

The Geographic name information has not been received at this office as of 26 September 1947.

38. POLITICAL BOUNDARIES:

No political boundary report has been received at this office as of 26 September 1947. See paragraph 38, Review report

44. COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES:

No topographic quadrangle is available for comparison, however, a U.S. G.S. planetable sheet was submitted and a comparison made.

The shoreline has changed considerably since the time of the planetable survey (1939), the mean high-water line along the ocean side moving inshore.



45. COMPARISON WITH NAUTICAL CHARTS:

A comparison was made with U.S. C. & G. S. chart No. 1232 bearing a 23 February 1946 print date. At the chart scale, the shoreline and other detail is in good agreement. A new channel has been dredged immediately north of Buxton and the spoil dumped north of the channel. (Another channel is in process of being dredged at Avon, not shown on map manuscript. See paragraph 9 of the Field Inspection Report).

Respectfully submitted,

Irving I Saperstein  
Photogrammetric Aid.

Approved and Forwarded:

George E. Morris, Jr.  
Chief of Party.

SUPPLEMENTARY COMPILATION REPORT,  
AFTER FIELD EDIT TO ACCOMPANY QUADRANGLE  
T-8714

- A. Field work on the metal mounted planetable sheet was transferred to the map manuscript by use of the projector. All aids to navigation were transferred graphically.
- B. It is believed that the geographic position for BIG KINNAKEET C.G. CHIMNEY 1938 is in error. The chimney was cut in radially and fell about 10m. west of plotted position. The geographic position, page 581, shows the chimney as an intersection station with no check. This error should be called to the attention of the Division of Geodesy. The scaled position of the chimney is: See Review Report

Lat.  $35^{\circ} 19' 310m.$   
Long.  $75^{\circ} 30' 1088m.$

- C. The old road 7 was deleted from the map manuscript where it coincided or nearly so with the new road 5. However, where the road 5 follows a new route, the road 7 was retained on the manuscript. The Washington Office should decide whether to retain or delete the road 7 since the field editor made no statement as to whether the old road should be retained. (See overlay for sections of road in question.)  
Road 7 retained.
- D. No mention whatsoever was made of the "Tower", Lat.  $35^{\circ} 15' 129m$  Long.  $75^{\circ} 31' 754m$ , by the field editor. (See item 34 compilation Report).  
See Review Report


The note on the bromide discrepancy print was "x-ed" out in blue pencil without any explanation.

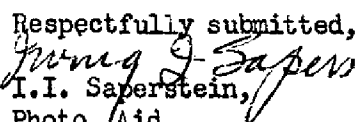
Washington Office should decide what should be done about "Tower."

- E. The Geographic Names were applied to "the map manuscript."
- F. No monuments of the Cape Hatteras State Park were recovered in the field. The map accompanying the legal description was inadequate to delineate the park boundary with any degree of accuracy. The park boundary was omitted from the manuscript. (See Boundary Report page 44--47.)

The township Boundary between Avon and Buxton was taken to mean the actual road distance between the two villages and not the latitude distance; it was thus shown on the manuscript.

Approved and Forwarded:

  
Ross A. Gilmore  
Lieut. Comdr. USC&GS  
Chief of Party.

Respectfully submitted,  
  
I.I. Saperstein,  
Photo. Aid.



DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

## NONFLOATING AIDS OR LANDMARKS FOR CHARTS

TO BE CHARTED  
~~TO BE DELETED~~

STRIKE OUT ONE

New Bern, N. C.

29 June

1948

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

The positions given have been checked after listing by

*George J. Saperstein*  
I. I. Saperstein, Photogrammetric Aide.

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

STATE	CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION					METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED				
				LATITUDE		LONGITUDE		DATUM										
				°	'	°	'											
NORTH CAROLINA	*	Muddy Blue Light		35	19	67	✓	75	36	911	✓	NA 1927	Plane table	June 1948	X		1232	
		Avon Channel Light 5		35	19	362	✓	75	34	610	✓	"	"	"	"	X		1232
		Avon Channel Light 6		35	19	1511	✓	75	33	1228	✓	"	"	"	"	X		1232
		Avon Channel Light 7		35	19	1415	✓	75	33	447	✓	"	"	"	"	X		1232
		Avon Channel Light 9		35	19	1686	✓	75	32	1460	✓	"	"	"	"	X		1232
		Avon Channel Light 10		35	20	648	✓	75	32	969	✓	"	"	"	"	X		1232
		Avon Channel Light 12		35	20	868	✓	75	32	709	✓	"	"	"	"	X		1232
		Avon Channel Light 13		35	20	563	✓	75	31	1272	✓	"	"	"	"	X		1232
	Avon Channel Light 14		35	20	1785	✓	75	31	350	✓	"	"	"	"	X		1232	
	Avon Channel Light 16		35	20	1825	✓	75	30	154	✓	"	"	"	"	X		1232	

L 702 (1948)

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



*Chief of Party.*

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.



**STRIKE OUT ONE**

# AN INNOVATING APPROACH TO LANDMARKS FOR CHARTS

Morehead City, N.C.

17 February 1947

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

The positions given have been checked after listing by Robert R. Wagner, Tampa Photogrammetric Office

STATE NORTH CAROLINA										Lieut. Comdr. R.J. Sipe Chief of Party.				
CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION						METHOD OF LOCATION AND SURVEY No.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
			LATITUDE		LONGITUDE		DATUM							
			°	'	D. M. METERS	°		'						
*Lighthouse OLD CAPE HATTERAS LIGHTHOUSE (Abandoned)			35	15	525	75	31	404.0	N.A. Triang. 1927	1933		X X	X X	1232 1232 1109
TOWER	This landmark is now charted as TOWER. and it is recommended the above name be used on charts.*  (Abandoned Lookout) Big Kinna- keet C.G. Station. (60 feet high)													
			35	19	266	75	30	1074.3	N.A. 1927	1938		X		1232
TANK	(Elev.) steel, water (100 feet high)		35	16	17	75	31	504	N.A. 1927	Feb 1947		X		1232
TOWER	Radio, steel (75 feet high)		35	15	1812	75	31	528	N.A. 1927	Feb 1947		X		1232
SPIRE	Arvon Pentecostal Church Spire (40 feet high.)		35	20	1631	75	30	821	N.A. 1927	Feb 1947		X		1232

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.



TO BE CHARTED  
TO BE DELETED

STRIKE OUT ONE

# NONLOCATING AIDS OR LANDMARKS FOR/CHARTS

Morehead City, N. C.

19 47

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

The positions given have been checked after listing by

J. S. Howell

Riley J. Sipe

*Chief of Party.*

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.



STRIKE OUT ONE

**TO BE DELETED**

# IDENTIFYING COMMON LANDMARKS FOR CHARTS

Morehead City, N. C.

17 February 1947

I recommend that the following objects which have ~~been~~ been inspected from seaward to determine their value as landmarks, be ~~added to the~~ *added to the* charts indicated.

The positions given have been checked after listing by

I. Y. Fitzgerald, Photo. Aid

R. 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.



FIELD EDIT REPORT  
Quadrangle T-8714  
35°15'-75° 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 either cut in by planetable or from measurements from topographic features.

Reference to the letter from Chief, Division of Photogrammetry (Field Edit of the Barrier Beaches) dated 18 May 1948, to Lieut. Comdr. Riley J. Sipe. *(Copy in Descriptive Report for T-8711)*

47. ADEQUACY OF THE COMPILATION

The compilation was adequate. The field inspection was not quite adequate throughout the entire quadrangle. Difficulties were encountered by the compiler in the delineation of buildings, vegetation, ditches, etc.

All aids to navigation were cut in by planetable on an aluminum mounted sheet. A minimum of three cuts to each aid; most of these aids having at least four cuts. Form 567 is incorporated within this report for the aids to navigation in this quadrangle.

Attention is called to the positions of Muddy Blue Light and North Point Light, both of which are triangulation stations established in 1938. Difficulty was encountered in the compilation office with the sextant fix of Muddy Blue Light which fell about 160 meters east of the plotted position. Planetable cuts were made during the field edit, and definitely proved that this light has been moved since 1938. (See metal mounted sheet) North point light's triangulation position was verified during the field edit by planetable cuts and by local inquiry.

Attention is called to triangulation station Big Kinnakeet Coast Guard Chimney, 1938. This station was recovered during 1947 but was not identified on the photographs. This station was pricked by the compilation office and its position did not agree with the plotted position. The field editor contacted several local people to determine the authenticity of the station and all persons contacted state



that this station has not undergone any changes. The station has been identified on photograph #16064; five meters south of the north end of the building.

A new road has been constructed from the village of Hatteras to the village of Avon. This road was located by planetable on the metal mounted sheet. The road has no base at all but the natural sand and has an asphalt mixture for its top. In all probability it will not accommodate any heavy traffic. It has been classified in a very low category.

A power plant has recently been constructed in the village of Buxton supplying power as far north as Rodanthe and south to within a few miles of Hatteras. This power line has been delineated on the field edit sheet from Avon to the northern portion of Buxton. It has not been delineated from Buxton toward Hatteras because it follows the new road very closely and would not be beneficial as a topographic feature.

Attention is called to the Cape Hatteras Lighthouse. This lighthouse was abandoned several years ago and was not in use during the field edit. The lighthouse was abandoned because of its nearness to the ocean beach. At the present time the lighthouse is 131 meters from the high-water line and according to local sources it will be in use again soon. The structure is in good condition.

A boat basin and a spoil bank in the village of Avon was located on the metal mounted sheet. The spoil bank has numerous five foot isolated contours upon it which may be of a temporary nature depending upon the removal of this spoil by the local residents.

The hunting house shown on Chart No. 1232 has been destroyed and should be deleted from the chart.

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

#### 48. ACCURACY TESTS

There were no accuracy tests specified for this quadrangle.

#### 18. GEOGRAPHIC NAMES

At approximate latitude  $35^{\circ} 22'$  and longitude  $75^{\circ} 30'$  there is a creek which is known widely as SPENCER CREEK. This creek's name was not shown during the geographic names investigation, but was verified by several local citizens. It is recommended that the name SPENCER CREEK be used.

The name GIBBS POINT was misplaced on the geographic names print. The position of this point is just south of its former location. This new location was verified by several local people and its change is recommended.

At approximate latitude  $35^{\circ}20'30''$  and longitude  $75^{\circ}31'$  there is a point which is known widely as OTTER POND POINT. The position of the name of this point has been shown on the geographic names print. It is recommended that the name OTTER POND POINT be used.

The name LONG POINT was misplaced on the geographic names print. The correct position of this point is just south of its location on the Name Sheet. This new location was verified by several local people and its change is recommended.

The map was examined for possible errors by Mr. F. L. Peele of Hatteras. Mr. Peele has been a resident of the vicinity for over forty years and is highly familiar with the area. He could find no errors except the afore mentioned discrepancies.

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



# GEOGRAPHIC NAMES

Survey No.

Name on Survey	A	B	C	D	E	F	G	H	K	
Big Island /										1
Gibbs Point /										2
Mill Creek /										3
Avon /										4
Spencer Creek /										5
Otter Pond Point /										6
Black Hammock /										7
Askins Creek /										8
Long Point /										9
Boat Creek /										10
Johns Creek /										11
Long Point Creek /										12
Great Island /										13
Bald Point /										14
Cape Creek /										15
Back Landing /										16
Atlantic Ocean*										17
Pamlico Sound*										18
North Carolina* /	(for title)									19
Buxton /										20
Buxton Channel /										21
Buxton Landing /										22
Hatteras Island /										23
Buxton Woods /										24
Cape Hatteras Light /										25
Pentacostal Church /										26
Methodist Church /										27
										M 234

# GEOGRAPHIC NAMES

Survey No.

Name on Survey	A	B	C	D	E	F	G	H	K	
<u>Brooks Creek</u>										1
<u>Brooks Point</u>										2
<u>Kings Point</u>										3
<u>Peters Ditch</u>										4
										5
										6
										7
										8
										9
										10
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										26
										27

M 234

\* - Decis. of BGN

Underlined names approved

10-26-48.

A. J. W.



DIVISION OF PHOTOGRAMMETRY  
Review Report of  
Topographic Map Manuscript T-8714

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

2. 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 56.0, MP 56.5, etc. Recovered bench marks have been shown on the map manuscript by the appropriate BM symbol. Unrecovered N.P.S. bench marks, which were transferred to the map manuscript from the U.S. Geological Survey maps have been shown as non-monumented bench marks, along with the mile post designations; they will be published as spot elevations.

The horizontal positions of two triangulation stations have been questioned by the compilation office. They are: Muddy Blue Light, 1938 and Big Kinnakeet C.G. Chimney, 1938. The planetable cuts taken on the light by the field editor show that this station has been destroyed. (See paragraph 47 - Field Edit Report) The Light List - Intracoastal Waterway of the United States, 1948, substantiates this by stating that the light was rebuilt in 1944. The other triangulation station, which could not be held in the radial plot, was discussed with the Division of Geodesy and it was found that this station was a "no-check" station with a chained distance and just one direct angle taken without a reverse reading. Although the position of the station could be correct it is recommended that the station should not be shown as a triangulation station on the map manuscript but as a topographic station. The name has been shortened to Chimney.

Form 524's have been submitted for the new positions of both stations. They are filed in the Division of Photogrammetry general files.

28 Detailing

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

The woodland classification was changed to agree with Photogrammetry Instructions 21.

The channel to Avon has been delineated on the map manuscript by the compilation office from a U.S. Engineer sheet showing the proposed channel and from the positions of the aids to navigation cut in by planetable methods by the field editor. The channel should not be shown 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.

### 32 Details Offshore from the High Water Line

Refer to paragraph 47 of Field Edit Report for the Hunting House shown on chart No. 1232.

The unnamed structure west of Avon in Pamlico Sound should be considered destroyed as the channel to Avon is located through the position that the structure formerly occupied. Neither is it shown on the latest nautical charts.

The ice house should be shown on the nautical charts as there is no evidence that it has been destroyed.

### 34 Landmarks and Aids to Navigation

The field editor has stated that the Cape Hatteras Lighthouse will be put in commission in the future according to local sources.

Comdr. Daniel of the U.S. Coast Guard was contracted concerning this matter. He stated that the Lighthouse would be put in commission, but he would not set a date. He further stated that there were certain conditions that had not been settled between the Coast Guard and the National Park Service, who are to take over the operation of the lighthouse.

As no date can be set, it is recommended that the lighthouse should not be used for charting purposes and it should still be shown as abandoned on the map manuscript.

The tower mentioned in paragraph 34 of the compilation report has been deleted from the map manuscript. Since the field editor made no mention of the tower, it is assumed that it no longer exists.

### 37 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 for T-8714. A special Geographic Names Report, Ph-5, is filed in the Geographic Names Section of the Division of Charts.

### 38 Political Boundaries

Boundaries were investigated by the field inspection party and the subject is adequately covered by a Special Report on Boundaries, Ph-5, filed in the general files of the Division of Photogrammetry.

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

### 44 Comparison with Existing Topographic Surveys

Comparison was made with the following: All common topographic features are superseded by T-8714.



377	1:20,000	1852
790	1:20,000	1860
1246	1:20,000	1872
3707	1:40,000	1917
3836	1:5,000	1921

There are no contemporary hydrographic surveys.

#### 45 Comparison with Nautical Charts

See sub heading 45 in the compilation report.

#### 47 Adequacy of the Compilation

An examination of map manuscript T-8714 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 Tests

##### 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 the 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 on the barrier beach 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:

B. Thomas Hynson  
B. Thomas Hynson, Oct. 28, 1948  
Cartographer, (Photogrammetrist)

Approved by:

A. V. Griffith  
Chief, Review Section *A. V. Griffith*

H. C. Edmonson  
Chief, Nautical Chart Branch  
Division of Charts

K. T. Adams  
Chief, Div. of Photogrammetry

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

T-8714

Record of Work Subsequent to the Manuscript Review,  
that is, Smooth Drafting, Checking, and Printing

Smooth Drafting: 30 January 1949

Checking: 16-18 February 1949

Manuscript forwarded to the U. S. Geological  
Survey for smooth drafting and publication.

28 February 1949

Color proof furnished by the Geological Survey and  
examined by \_\_\_\_\_

Name

Date

Published by the Geological Survey.