

8203

8203

Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Junction with <i>Topographic</i>	
Type of Survey Planimetric <i>Air Photographic</i>	
<i>Cape Fear Quadrangle</i>	
Field No.	Office No. <i>T-8203</i>
LOCALITY	
State	<i>North Carolina</i>
General locality	<i>Brunswick County</i>
Locality	<i>Cape Fear & Bald Head</i>
<u>194 2</u>	
CHIEF OF PARTY	
<i>Wm. D. Patterson</i>	
Fred. L. Possoch	
LIBRARY & ARCHIVES	
DATE	<i>June 4, 1946</i>

applied to chart 424 4/42

" " " 1236 4/42

" " " 835 12/43

" " " 1236 7/44

} copied from fly leaf
of old descr. report
cover. page.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

78203

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. CS-275-24
Cape Fear Quadrangle

REGISTER NO.

State North Carolina

General Locality Brunswick County

Locality Cape Fear Quadrangle

Scale 1:20,000 Date of survey April 1 to 16, 19 42

Vessel Defense Mapping Party No. 1

Chief of party Lieut. Comdr. Wm. D. Patterson

Surveyed by Caswell Silver, Senior Photogrammetric Aid,

Inked by Caswell Silver, Senior Photogrammetric Aid,

Heights in feet above MSL to ground ~~to tops of trees~~

Contour, ~~Approximate contour, Form line interval~~ 20 feet

Instructions dated January 23, 19 42

Remarks: None

General Procedure in the Production of Topographic Quadrangles for the War Department

This quadrangle, together with similar adjoining maps produced under Project C.S. 275, was prepared by the Coast and Geodetic Survey for the War Department under "General Specifications for War Department Mapping Program" issued about December 1941, in which is incorporated the "Standard of Accuracy for a National Map Production Program" issued by the Bureau of the Budget under date of June 10, 1941.

The general procedure in the production of this and the adjoining quadrangles was:

1.

PREPARATION OF BASE MAPS

Assembly into quadrangle base sheets by photographic means of previously produced planimetric maps of the area. These maps were compiled by this Bureau from aerial photographs taken in April, 1942 and were published in 1942 on the scale of 1:20,000. Lithographic prints of the quadrangle base sheets on cloth-mounted paper were furnished to the field parties and similar prints in red ink on celluloid sheets were furnished to the compilation office.

2.

FIELD SURVEYS

Aerial photography with the Coast and Geodetic Survey nine-lens camera, with airplane and flight crew furnished by the U. S. Coast Guard. The photographs were taken to the scale of 1:20,000. ~~Their photographs were not used for this quadrangle.~~ Ground inspection of the photographs for identification of control points, and classification and clarification of planimetric details on the photographs. ~~The field parties were permitted to make field inspection notes either on the photographs or on the planimetric base sheet.~~

Contouring by planetable, directly on the photographs or on the planimetric base sheet at the option of the field party. The contouring for this quadrangle was done on the planimetric base sheet and all connections to planimetry were made by planetable on that sheet.

** The new photographs were not available until after completion of the field work on this quadrangle. They were used by the reviewer in the Washington office to verify the completeness of the field work. B.S.G.*

Supplementary vertical control was established by means of an extensive subordinate level net, furnishing unmarked elevations at road intersections, driveways, and numerous other points identifiable on the photographs.

3.

COMPILATION OF MANUSCRIPT

~~Revision of the planimetric base map from the new photographs and addition of contours and corrections obtained by the field parties. No radial plot was made for this work.~~

No new manuscript was compiled.

FIELD EDIT

Comparison of a copy of the corrected manuscript with the ground. This included inspection for completeness and accuracy as well as the location by planetable methods of additional details, checking of nautical and aeronautical aids to navigation, etc. Steps 2 and 4 were accomplished simultaneously.

Accuracy Tests - Application of systematic horizontal and vertical accuracy tests to check the maps for conformity with the specifications. These tests consisted of comparison of the map position and elevation of selected random points with the true position and elevation as independently determined by standard survey methods.

PROCESSING IN THE WASHINGTON OFFICE

Review - Examination of the manuscript for accuracy and completeness of compilation and compliance with specifications, correcting where necessary; addition of military and state grids and other special features; and verification of the general adequacy of the manuscript as a basis for the production of a finished map.

Drafting and Reproduction - Preparation of smooth color separation drawings on 1:20,000 scale on metal-mounted "blue-line" copies of the manuscript. From these drawings, negatives and printing plates were prepared for reproduction of the finished map on the scale of 1:31,680 or 1:25,000.

DESCRIPTIVE REPORT TO ACCOMPANY CAPE FEAR QUADRANGLE

DEFENSE MAPPING PROJECT CS-275

Wm. D. Patterson, Chief of Party

Instructions for this project were dated January 23, 1942.

GENERAL DESCRIPTION OF QUADRANGLE

Quadrangle 24 includes that portion of Smith Island east of the Cape Fear River and south of Latitude $33^{\circ} 52' 1/2''$. Smith Island is a typical offshore barrier beach built up by wave action on a shallow drowned coastal plain and transformed by the wind into high fast ground. The distinct physiographic form of the inland is the result of the formation of lobate dunes into long bands by prevailing winds. Bluff and Middle Islands comprising the northern part of Smith Island are old dune lines that are now completely concealed and anchored by vegetation. Bald Head Island includes a series of parallel sand dune fields which, like Bluff and Middle Islands, have been covered and anchored by dense vegetation.

The highest land is found on the present active dune field which is advancing northward at the rate of roughly 20 feet a year and slowly destroying the forested portion of the island. These dunes achieve their height because of the impeding forest which acts as a bulwark against which the dunes accumulate. This forest barring has slowed the forward movement of the dunes and formed a steep embankment on the lee or north side of the dunes as indicated by the contours.

The old dune fields on the inner portion of Bald Head Island form an area of low relief below the 20 foot contour.

VEGETATION

Vegetation where found, consists of palms, cedar, and myrtle, and is in general, so dense that no progress on foot away from existing roads can be made without the greatest difficulty.

CHARACTER OF CONTROL AND SURVEYING METHODS USED

The entire quadrangle was mapped on one long planetable traverse of about nine miles, and one subsidiary traverse of three miles. Vertical control was taken and tied to the same point B.M.E.B.H. at Bald Head Light. Horizontal control was kept by traverse and checked frequently by three point fix.

CLOSING ERRORS AND HOW ADJUSTED

The greatest closing error for vertical traverse was on the 9 mile traverse. It was 0.7 foot. No adjustment was made.

There were no horizontal closing errors since frequent intersection and resection on triangulation stations was possible.

AUXILIARY SURVEYING METHODS USED

The small closed 20 foot contour north of the Coast Guard station, Lat. $33^{\circ} 51.5$ N., Long. $77^{\circ} 59.3'$ West, was run by compass, pace and hand level traverse because of the dense vegetation.

REVISION

Note the change in hydrographic Station L.H.S. #3, 1934. This location was checked by Stadia Measurement from the nearest house. This station is a 3-inch wood stake driven into loose ground with a standard disc at the top. Since this area is frequented by numerous fishing parties, and the stake easily moved, this may indicate that its location has been changed by private individuals.

Original description noted - "Station in poor condition and probably moved in position 1942"

The relocation of the ribbed wreck at the southwest corner of Bald Head, Lat. $33^{\circ} 51.7$ north, Long $78^{\circ} 00.6'$ west, was checked by stadia measurement to the old rifle range. Since the shoreline here shows extensive and frequent changes the change quite probably can be accounted for by shifting by wave action.

CHANGES OF COAST LINE

Minor coast line changes occur along the southern edge of Smith Island. The only notable change is at the point of Cape Fear which changed from a straight spit to a recurved spit. Information from the Lighthouse Keeper, resident at Cape Fear Light for 15 years would indicate that this is a seasonal change. The straight spit being more typical of summer tides and currents while the recurved spit results from heavy winter storms.

The channel to the Coast Guard Dock in Bald Head Creek is no longer south of the old range light base, but runs straight from the creek entrance to the Bald Head Shoal Range Front Beacon passing 50 feet north of the B.H.S.R.F.B.

MARSHES

The Marshes in general, are covered by 2 to 6 inches of water at high tide.

LANDMARKS

There are no additional landmarks on this sheet.

GEOGRAPHIC NAMES

A list of geographic names in this area is covered in a special report.

PHOTOGRAPHS

No photographs were used as an aid to mapping on this sheet by the topographer.

BOUNDARIES

No boundaries occur on this sheet.

BEACONS AND LIGHTS

All beacons and lights were visited and no discrepancies with existing U.S.C. & G. S. charts were noticed.

JUNCTION WITH ADJACENT SHEETS

All junctions with adjacent sheets occurred on open water areas except with Quad. 25. There was no overlapping detail on this junction since it occurred in marsh area where no detail had to be added.

This report submitted by

Caswell Silver

Caswell Silver

Senior Photogrammetric Aid

U. S. Coast and Geodetic Survey

Approved and forwarded:



Wm. D. Patterson,
Lieut. Comdr. U. S. C. & G. S.
Defense Mapping Field Party No. 1

T-8203

Remarks

Decisions

1		338779
2		" USGB
3		"
4		"
5		"
6		"
7	Approved by Board as on name sheet No. 24	" USGB
8	" " " "	" "
9		"
10		"
11		
12		
13		338779
14		337779
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GEOGRAPHIC NAMES

Survey No. T-8203

CAPE FEAR quadrangle

Name on Survey

	A, On Chart No.	B, On previous survey No.	C, On U. S. quadrangle Maps	D, From local information	E, On local Maps	F, P. O. Guide or Map	G, Rand McNally Atlas	H, U. S. Light List	K	
Cape Fear										1
Smith Island										2
Bay Beach										3
Middle Island										4
Bluff Island										5
Yellow Bluff										6
Baldhead Creek										7
Cape Creek										8
Fishing Creek										9
Deep Creek										10
Onslow Bay										11
(Raleigh/is much to northeastward)										
Also approved if names are to be applied:										12
Cape Fear Slue										13
Frying Pan Shoals										14
										15
										16
										17
										18
Bald Head as previously approved by the Board and recently re-affirmed										19
applies only to the western extremity of Smith Island, west of long.										20
78. Do not follow application shown on Name Sheet No. 24.										21
Bay Creek is north of the limits of this sheet (recently approved by										22
USGB)										23
										24
										25
										26
										27

RECORDS

Between January, 1942 and July, 1944, this Bureau completed 323 quadrangles. These maps have been published, or are in the process of being published on scales of 1:31,680 or 1:25,000. This series of quadrangles includes a land area of approximately 15,000 square miles. Incident to this work, a considerable volume of survey records and data has accumulated which will be filed for future reference. This material is filed as follows:

Registered and Filed in the Vault

Cloth-mounted copy of the published quadrangle.

published quadrangle at 1:20,000 scale
Black and white cloth-mounted copy of the ~~map~~ manuscript. This copy is filed to preserve original survey detail shown on the manuscript at 1:20,000 scale which may not have been shown on the published sheet. For ~~political-boundaries~~, woodland, ~~marsh-and-swamp-limits~~, refer to the published quadrangle for the finally adopted ~~positions~~. outlines.

Descriptive Report.

Division

Filed in the Photogrammetric Section--Surveys-Branch

Field inspection photographs.

Contoured photographs (on which planetable contouring work was performed.)

Field edit sheet.

Descriptions of recoverable topographic stations (Form 524), filed in Reviewing-Unit. Section.

Supplementary traverse and level records.

Field notes, computations, lists of positions, and tabulations of results of horizontal and vertical accuracy tests.

Reproduction proof.

Correction sheet (copy of quadrangle showing in red changes to be made when next printed.)

Check lists of work performed on each sheet in the Washington Office during review, drafting, edit, and reproduction.

Original celluloid manuscript.

Copies of specifications and all instructions to field parties and field offices.

Filed in Reproduction Branch

Glass negatives of the color separation drawings.

Filed in the Library

~~Special report on field work by Commander K. T. Adams, 1944.~~

Special report on office work by B. G. Jones, 1944.

Season's report on field work by Commander F. L. Gallen, 1944.

Season's report on field work by Commander R. L. Schoppe, 1944.

Delivered to the Army Map Service in accordance with the contract

Film negatives and film positives of the color separation drawings.

All color separation drawings.

~~Original celluloid manuscript.~~

A correction sheet consisting of a copy of the first edition of the quadrangle with notes in red indicating changes desirable at the next printing.

DIVISION OF CHARTS

SURVEYS BRANCH

REVIEW OF AIR PHOTOGRAPHIC SURVEY T-8203

CAPE FEAR QUADRANGLE

This quadrangle manuscript has been examined for completeness, accuracy, and conformity with the specifications. It is adequate for smooth drafting, reproduction and publication. Revisions found to be necessary in this office are discussed on the next page.

Horizontal and Vertical Accuracy

The closest horizontal and vertical accuracy tests were run on T-8198.

Previous Surveys

This manuscript has been compared with the following previous topographic surveys of this Bureau and other agencies. This map is satisfactory to supersede the previous surveys over the common area.

The planimetry for this map manuscript was taken from the air photographic survey T-5241. For the list of previous topographic surveys covering this area see the descriptive report on T-5241.

Comparison with Nautical Charts Nos.

original field sheet
The ~~manuscript~~ has not been applied to the charts ~~at~~ *424 and 1236 prior to* the date of this review. The following comments are pertinent to the compilation and correction of nautical charts:

rather changes significant to the charts
No shoreline changes were made during the review.

(Since review the map manuscript has been applied to charts Nos. ~~424, 835, 1236~~ *and again to charts 1236*)

The following revisions of the map manuscript were found to be necessary and were accomplished as a part of this review:

Only changes of a minor nature were necessary during the review of this map manuscript.

Note The original field sheet (see sections 1 and 2 page 1 of this report) was registered in May 1942 but has been withdrawn and placed in the files of the Division of photogrammetry. A copy of the completed quadrangle accompanies this report and is to be registered in lieu of the field sheet in accordance with practice for all the other topographic maps in this series. B.G. Jones

Reviewed Sept 10, 1942 By J. H. McBeath
under direction of D. H. Benson per D.M.

Inspected by B. G. Jones B.G. Jones 5/46

Examined and approved:

K.T. Adams
Chief, Surveys-Branch-
Division of Photogrammetry

Chief, Topography-Section

Robert W. Knox
Chief, Div. of Charts
Robert W. Knox
Chief, Nautical Chart Branch
Raymond R. Egan
Chief, Div. of Coastal
Surveys