

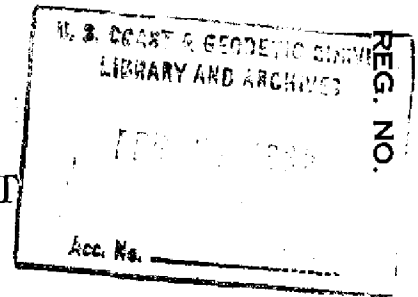
# 6210a

# 6210a

Form 504 Rev. Dec. 1933	
DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, Director	
DESCRIPTIVE REPORT	
Topographic <del>Hydrographic</del>	6210a Sheet No. AB T-6210a
State North Carolina	
LOCALITY	
Cape Fear	
Smith Island & Vicinity	
1934	
CHIEF OF PARTY	
B.H. Rigg	

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

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. AB 6210a

REGISTER NO.

State North Carolina

General locality Cape Fear River, Southport, N.C.

Locality Smith Island <sup>and</sup> Vicinity

Scale 1/10,000 Date of survey August, 1934

Vessel Party No. 19

Chief of party Benjamin H. Rigg

Surveyed by Addison S. Hall

Inked by Addison S. Hall

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated October 10, 1933

Remarks:

## OUTLINE

1. INSTRUCTIONS
2. PURPOSE OF SURVEY
  - A. Hydrographic Control
  - B. Establishment and Recovery of Permanent Stations
  - C. Location of Aids to Navigation
  - D. Location of Topographic Detail for use in the Air Photo Compilation
3. LIMITS OF SHEET
4. DESCRIPTION OF TERRITORY
5. CONTROL
6. SURVEYING METHODS USED
7. PERMANENT STATIONS ESTABLISHED
  - A. Permanent Hydrographic and Topographic Stations
  - B. U. S. E. D. Stations
  - C. Beach Erosion Stakes -- U. S. Light House Service
8. AIDS TO NAVIGATION
9. LANDMARKS AND NAMES
10. TOPOGRAPHIC FEATURES LOCATED FOR USE IN AIR PHOTO COMPILATION

DESCRIPTIVE REPORT TO ACCOMPANY  
ALUMINUM MOUNTED CONTROL SHEET AB

INSTRUCTIONS

The survey was carried out under instructions dated October 10, 1933, also Director's letters 22Mg 1990 (19), 26- AHH 293, and circular letter No. 30.

PURPOSE OF SURVEY

The purpose of the survey was to establish hydrographic control for the development of The Cape Fear Slue, to locate Aids to Navigation, to establish permanent hydrographic and topographic stations, to recover U. S. Army Engineers' stations, to tie in beach erosion stakes of the U. S. Light House Service at Cape Fear, and to locate topographic detail for use in the Air-Photo Compilation.

LIMITS OF SHEET

Topography includes Smith Island from the tip of Cape Fear on the south, northward to lat.  $33^{\circ} 53'$ . It also includes Ft. Caswell on the eastern tip of Oak Island, lat.  $33^{\circ} 53.5'$ , long.  $78^{\circ} 01.0'$ .

DESCRIPTION OF TERRITORY

Smith Island consists, in the northern part, of marshy ground covered with grass four feet high, and scattered clumps of bushes. The marsh is cut up by winding creeks emptying into the Cape Fear River. On the eastern side of the island the sea has built up a barrier of sand between it and the marsh.

South of the marsh, between the Bald Head and Cape Fear Light Houses, which are connected by a road, is a very dense forest of low deciduous trees and undergrowth, approximately one-half mile in width.

Between the forest and the sea lies a relatively narrow strip of grass covered dune and sand flats.

Ft. Caswell, on the eastern tip of Oak Island, is an abandoned Military Post, with extensive earthworks, gun emplacements, and about thirty wooden buildings in various stages of decay.

#### CONTROL

The following triangulation stations were used as control on sheet AB

BALD HEAD LIGHT 1851  
THREE CEDARS 1905  
CAPE FEAR LIGHT 1905  
FT. CASWELL FLAG STAFF 1913  
TOWER 1913  
STACK FT. CASWELL 1932  
SMITH 1934  
COAST GUARD OBSERVATION TOWER 1934  
SMITH ISLAND RANGE, REAR 1934  
SMITH ISLAND RANGE, FRONT 1934  
BALD <sup>Head</sup> SHOAL RANGE, REAR 1934  
BALD HEAD SHOAL RANGE FRONT 1934

#### SURVEYING METHODS USED

A line of telephone poles was used as an aid in building signals for hydrographic control. Banners on these poles were located by running a steel tape traverse around the south end of the Island, close to the high water line, from Bald Head Light to Cape Fear Light, and taking cuts to the banners from turning points on the traverse. Cuts to most of the turning points of the traverse were obtained from set-ups on the Light Houses. This served to control the traverse well, and no adjustment was necessary. The high water line and portions of the low water line were located in conjunction with the running of this traverse. A second traverse was run from Cape Fear light around the southeast tip of the island, and northward to triangulation station SMITH. An adjustment of 2.5 meters was made in this traverse. Its purpose was the location of hydrographic signals, and high and low water lines.

The survey was completed by making set-ups on triangulation stations on Smith Island and at Ft. Caswell. Several re-sections were used in locating the detail at Ft. Caswell.

PERMANENT STATIONS ESTABLISHED

A. Permanent Hydrographic and Topographic Stations.

Two permanent H. & T. Stations were established, RJB on the southwest tip of Smith Island, and CON in the marsh southwest of Buzzard's Bay. Descriptions of these stations on form No. 524 accompany the report. They are designated on the topographic sheet with the letter D following the name of the station.

B. U. S. E. D. Stations Recovered.

Two U.S.E.D. Stations fell within the limits of this sheet, B.H. Jr., and B.H. Jr. No. 2. B.H. Jr., previously cut in by triangulation, had been destroyed by sand undermining the station. A recovery note to this effect accompanies the sheet. A second station B.H. Jr. No. 2 established in its place by the U. S. Engineers, was located topographically. A description on form No. 524 of this station, which is designated with the letter D on the sheet, accompanies the report.

C. Beach Erosion Stakes -- Located for the U. S. Light House Service.

The U. S. Light House Service has established stakes at Cape Fear from which measurements to the high water line are made at frequent intervals to determine the rate of advance or recession of the beach. These stakes were located on the topographic sheets. At the request of the Light House Service, an enlarged tracing of the portion of the sheet showing these stakes was made, and forwarded to the Charleston Office of the Light House Service. One of these stakes was marked by us with a standard bronze station marker set in the top. A description on form 524 of this station, which is designated with a D on the sheet, accompanies the report.

#### AIDS TO NAVIGATION

The only Aids to Navigation within the limits of this sheet not located by triangulation were the buoys at the entrance to the Cape Fear River. Topographic positions of these buoys were obtained and checked with the positions obtained by the hydrographic party. In the case of buoy L.G. 7A, there was a discrepancy of approximately 25 meters. The topographic position was considered stronger and used on the hydrographic smooth sheet. All others checked within ten meters.

#### LANDMARKS AND NAMES


Extensive changes should be made in the present charts with reference to Landmarks. Among the changes should be mentioned the addition of the Cape Fear Coast Guard Observation Tower, <sup>and</sup> the Ft. Caswell Stack. Several Landmarks in this area shown on the present chart should be deleted. A chart section showing these recommendations has been prepared and accompanies this sheet together with the Report on Landmarks on Form 567. The supplemental instructions on the preparation of form 567 have been complied with.

All names on the present charts pertaining to the area covered by this sheet are correct. No new names should be added.

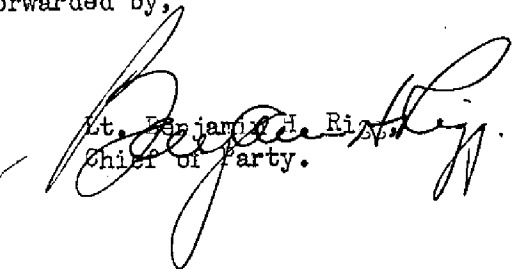
#### TOPOGRAPHIC FEATURES LOCATED FOR USE IN AIR PHOTO COMPILATION

The high water line on all sandy beaches together with portions of the low water line was located. Several patches of shoreline along the creeks and the marshy interior of Smith Island were located as a check on the radial plot. All docks and the important buildings of the Cape Fear Coast Guard Station and Light House Station are also shown. No discrepancies of more than 5 meters were found between the topographic location and the Air Photo Compilation except in the case of the high water line on the sandy beaches. In all cases the compilation was corrected to agree with the topographic sheet.

Respectfully submitted,

  
Addison S. Hall,  
Surveyor

Forwarded by,

  
Lt. Benjamin H. Rix,  
Chief of Party.

DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY

## LANDMARKS FOR CHARTS

Southport, N. C.November, 1934

DIRECTOR, U.S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Sheet A.B.

Benjamin H. Rigg.

Chief of Party.

DESCRIPTION	POSITION						METHOD OF DETERMINATION	CHARTS AFFECTED	
	LATITUDE			LONGITUDE					DATUM
	°	'	D.M. METERS	°	'	D.P. METERS			
( Coast Guard Obs. Tower-- Big) LOOKOUT TOWER 1-2-3	33	51	488.0 (1360.6)	77	59	578.0 (964.5)	N.A. 1927	Triangu- lation	424, 425, 1235, 1236, 1110, <del>1110</del>
( Chy) 82' High STACK FT. Caswell 2-3	33	53	1141.0 (707.6)	78	00	1194.1 (17.8)	"	"	424, 425, 1236
							</		

A list of objects carefully selected because of their value as landmarks as determined from seaward, together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive identification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) Offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

## Review of Air Photo Compilation T-5210a.

This sheet has been examined in connection with the review of air photo compilation T-5241. One omission was noted on T-6210(a) in green ink. See T-5241 for complete topographic information.

L. A. Mulsam  
March 15, 1935.

6210b

6210b

Form 504 Rev. Dec. 1933	
DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, DIRECTOR	
DESCRIPTIVE REPORT	
Topographic <del>Hydrographic</del>	Sheet No. <u>AC</u> T-6210b
62103	
State <u>North Carolina</u>	
LOCALITY	
Vicinity of Cape Fear	
Oak Island	
1934	
CHIEF OF PARTY	
B.H. Rigg	

DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY  
LIBRARY AND ARCHIVES

REG. NO.

FEB 19 1935

Acc. No. \_\_\_\_\_

TOPOGRAPHIC TITLE SHEET

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

Field No. AC 6210b

REGISTER NO.

State North Carolina

General locality Vic. of Cape Fear River, Southport, N. C.

Locality Southport and Oak Island

Scale 1/10,000 Date of survey September, 19 34

Vessel Party No. 19

Chief of party Benjamin H. Rigg

Surveyed by Addison S. Hall

Inked by Addison S. Hall

Heights in feet above \_\_\_\_\_ to ground to tops of trees

Contour, Approximate contour, Form line interval \_\_\_\_\_ feet

Instructions dated October 10, 19 33

Remarks: \_\_\_\_\_

## OUTLINE

1. INSTRUCTIONS
2. PURPOSE OF SURVEY
  - A. Establishment and Recovery of Permanent Stations.
  - B. Location of Aids to Navigation
  - C. Location of Topographic Detail for use in Air Photo Compilation
3. LIMITS OF SHEET
4. DESCRIPTION OF TERRITORY
5. CONTROL
6. SURVEYING METHODS USED
7. PERMANENT STATIONS ESTABLISHED
  - A. Permanent Hydrographic and Topographic Stations.
  - B. U. S. E. D. Stations
8. AIDS TO NAVIGATION LOCATED
9. LANDMARKS AND NAMES
10. TOPOGRAPHIC FEATURES LOCATED FOR USE IN AIR PHOTO COMPILATION

DESCRIPTIVE REPORT TO ACCOMPANY  
ALUMINUM MOUNTED CONTROL SHEET AC

INSTRUCTIONS

The survey was carried out under instructions dated October 10, 1933; also Director's letters 22Hg 1990 (19), 26-AHH 293, and circular letter No. 30.

PURPOSE OF SURVEY

The purpose of this survey was to establish and recover permanent stations, to locate Aids to Navigation, and to locate topographic detail for use in the Air Photo Compilation.

LIMITS OF SHEET

The topography includes the entire waterfront at Southport, extending up the Cape Fear River to lat.  $33^{\circ} 55.1'$  long.  $78^{\circ} 00.8'$ . It includes the intracoastal waterway from its junction at Southport with the Cape Fear River westward to lat.  $33^{\circ} 55.4'$  long.  $78^{\circ} 05.5'$ . On the south it includes Oak Island from Ft. Caswell west beyond the Coast Guard Station and Caswell Beach to lat.  $33^{\circ} 54.2'$  long.  $78^{\circ} 05.5'$ .

DESCRIPTION OF TERRITORY

Southport, near the mouth of the Cape Fear River, is a fishing town of about two thousand population. Is it a stopping place for yachts, as good accommodations for re-fueling are available.

The intracoastal waterway, throughout the area covered by this sheet, is cut through marsh which lies behind the sandy barrier of Oak Island. The marsh is cut up by rivers and creeks, and bordered by forests of pine and oak.

Ft. Caswell on the eastern tip of Oak Island, has been described in the report accompanying sheet AB. The Oak Island Coast Guard Station, one half mile west of Ft. Caswell, is equipped with an observation Tower, surf boats, and a picket boat.

CONTROL

The following triangulation stations were used for control on this sheet:

SOUTHPORT EPISCOPAL CHURCH 1905	POND 1933
FT. CASWELL FLAG STAFF 1905	CLEM 1933
TOWER 1913	HOOK 1933
SOUTHPORT METHODIST CHURCH 1923	U.S.E. NO. 1 1933
A.L. (U.S.E.) 1923	U.S.E. NO. 2 1933
R. (U.S.E.) 1923	BEACON NO. 1 1933
R.B. 1923	BEACON NO. 11 1933
SOUTHPORT WHITE SPIRE 1932	BEACON NO. 17 1933
SOUTHPORT WATER TANK 1932	BRIDGE 1933
OAK ISLAND LIFE SAVING STATION 1932	ROAD 1933
AUX 1923	OAK 1933 <sub>2</sub>
	CREEK 1933
	MOUTH 1933
	BATTERY I BEACON 2A 1934

SURVEYINGS METHODS USED

The waterfront at Southport was mapped by running a short steel wire traverse east and west on station AUX on what is locally known as the Garrison. This traverse was checked in at either end by resection on triangulation stations. Set-ups were made at points along this traverse to rod in the docks and high water line, and to take cuts to beacons.

All of the beacons along the waterway were located by cuts from triangulation stations. Control was more than adequate on this sheet and no difficulties were encountered in carrying the survey to completion.

PERMANENT STATIONS ESTABLISHED

A. Permanent Hydrographic and Topographic Stations.

No permanent stations were marked throughout the area covered by this sheet since control is already more than adequate. The following prominent objects were located by topography, and may be used as permanent hydrographic stations:

SOUTHPORT WEATHER BUREAU SIGNAL MAST  
WEST WIRELESS TOWER  
EAST WIRELESS TOWER  
OBSERVATION TOWER OAK ISLAND COAST GUARD STATION  
CUPOLA NORTH COAST GUARD BUILDING  
WEST GABLE SOUTH COAST GUARD BUILDING  
EAST GABLE CASWELL BEACON PAVILLION  
EAST GABLE OLD SEARCHLIGHT TOWER  
CHILLEY NEW FISH FACTORY

B. The U. S. Engineer Department has permanently marked stations along the waterway at intervals at from half a mile to a mile. Wherever practicable those stations not already located by triangulation, were located topographically, designated with the letter D on the sheet, and described on form 524.

The following Engineers stations were <sup>re</sup>covered on sheet AC:

Located by Triangulation:

U.S.E.D. Station 10 1933  
A.L.(U.S.E.D.) 1923  
R. (U.S.E.D.) 1923  
U.S.E. No. 1 1933  
U.S.E. No. 2 1933

Located by Topography

SEWER MANHOLE U.S.E.

AIDS TO NAVIGATION

The Aids to Navigation on the area covered by this sheet consist of lighted beacons and day markers. All beacons not already located by triangulation were cut in by topography, and all those cut in by triangulation were checked in the field to make sure that they had not been moved. A list of the positions of these beacons on form 567 accompanies this sheet.

LANDMARKS AND NEW NAMES

A list of Landmarks on form 567 accompanies this sheet together with the chart section showing recommendations for addition and deletion of Landmarks. The requirements stated in the supplementary instructions on Landmarks have been complied with.

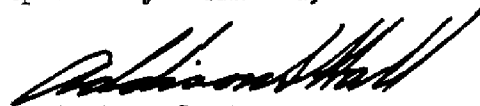
All names on the present charts pertaining to the area covered by this sheet are correct. No new names should be added.

TOPOGRAPHIC FEATURES LOCATED FOR USE IN AIR PHOTO COMPILATION

High water line along the ocean beach was rodged in at frequent intervals. Strong checks were afforded by comparison with the topographic positions of the docks at Southport, the New Fish Factory, the Gun Emplacement,

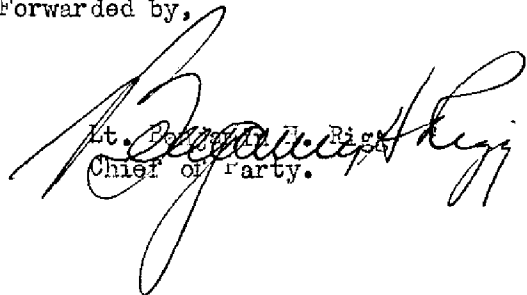
at Ft. Caswell, and the East Gable of the Caswell Beach Pavillion, as well as portions of small creeks which were rodded-in near triangulation stations in conjunction with taking cuts to beacons. No discrepancies of more than three meters were found.

Respectfully submitted,



Addison S. Hall,  
Surveyor

Forwarded by,



Lt. P. J. H. Rigg,  
Chief of party.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

## LANDMARKS FOR CHARTS

Southport, N. C.

November 1934

DIRECTOR, U.S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Benjamin H. Rigg, *Chief of Party.*

Sheet AC

[illegible]

A list of objects carefully selected because of their value as landmarks as determined from seaward, together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

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DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

## LANDMARKS FOR CHARTS

Southport, N. C.November, 1934

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Sheet AC

Benjamin H. Rigg.

Chief of Party.

DESCRIPTION	POSITION						METHOD OF DETER- MINATION	CHARTS AFFECTED	
	LATITUDE			LONGITUDE					DATUM
	°	'	D. M. METERS	°	'	D. P. METERS			
Beacon No. 3	33	54	1663.9 (184.7)	78	02	659.5 (882.1)	N.A. 1927	Planeta- blo.	424, 1236 Inside Route
Beacon No. 5	33	54	1724.6 (124.0)	78	01	1069.6 (472.0)	"	"	"
Beacon No. 7	33	55	67.5 (1781.1)	78	02	754.7 (786.6)	"	"	"
Beacon No. 9	33	55	173.1 (1675.5)	78	02	1402.8 (138.5)	"	"	"
Beacon No. 13	33	55	310.0 (1538.6)	78	03	728.1 (813.2)	"	"	"
Beacon No. 15	33	55	385.1 (1463.5)	78	03	1225.8 (315.5)	"	"	"
Beacon No. 19	33	55	520.7 (1277.9)	78	05	381.0 (1160.3)	"	"	"
Battery Isle Bu. No. 2-A	1934 33	54	758.0 (1090.6)	78	01	107.4 (1134.2)	"	Triangu- lation	"
Sheet AB									
Smith Isle Range Rear	1934 33	54	174.1 (1674.5)	78	00	331.2 (1210.4)	"	"	"
Smith Is. Range Front	1934 33	53	1187.4 (661.2)	78	00	451.9 (1090.0)	"	"	"
Bald Head Shoal R. Rear	1934 33	53	1333.4 (465.2)	77	53	1451.3 (90.6)	"	"	"
Bald Head Shoal R. Front	1934 33	52	1842.3 (6.3)	77	59	1226.0 (316.2)	"	"	"

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Review of Graphic Control Survey No T-6210 b.

This sheet has been examined in connection with the review of air photo compilation T-5241 and no errors noted. See T-5241 for complete topographic detail.

L. A. McIsaac  
March 15, 1935.