

5191

U. S. COAST & GEODETIC SURVEY  
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Topographic  
~~Hydrographic~~

Field No. 39

Sheet No. Reg. No. 5191

# DESCRIPTIVE REPORT

Form 504  
Rev. Dec. 1933

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
R. S. PATTON, DIRECTOR

State NORTH CAROLINA

LOCALITY

CAPE FEAR RIVER

CITY of WILMINGTON and VICINITY

1934

CHIEF OF PARTY

E. H. Kirsch

U. S. GOVERNMENT PRINTING OFFICE: 1934

5191

DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY

REG. NO.

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. 39  
Register No. 5191  
REGISTER NO.

State North Carolina

General locality Cape Fear River

Locality City of Wilmington and Vicinity

Scale: 10,000 Photographs - Sept. 25, 1933  
10,000 Date of survey 10, 1934, 19  
Compilation - October 25, 1934

Vessel Air Photo Compilation Party No. 21, Charleston, S. C.

Chief of party E. H. Kirsch

Surveyed by See data sheet in descriptive report.

Inked by R. G. Hickson & E. J. Anderson

Heights in feet above --- to ground to tops of trees

Contour, Approximate contour, Form line interval --- feet

Instructions dated November 10, 1933, 19

Remarks: None.

Photos No.  
804 - 827

Date  
Sept 25, 1933

Time  
3:30 P.M.

Stage of Tide  
1 hour after a high tide of  
3.2 Feet

PROJECTION BY

L. C. Ripley 7-18-34  
L. C. Ripley

PROJECTION CHECKED BY

E. H. Kirsch 7-18-34  
E. H. Kirsch

CONTROL PLOTTED BY

M. L. Smith 7-29-34  
M. L. Smith

CONTROL CHECKED BY

R. G. Hickson 8-1-34  
R. G. Hickson

CONTROL PLOTTED ON PHOTOS BY

R. G. Hickson 8-7-34  
R. G. Hickson

CONTROL CHECKED ON PHOTOS BY

J. F. Richardson 8-10-34  
J. F. Richardson

RADIAL PLOT BY

R. G. Hickson 8-11-34  
R. G. Hickson

RADIAL PLOT CHECKED BY

L. C. Lande 8-16-34  
L. C. Lande

SCALE PLOT BY

L. C. Lande 7-16-34  
L. C. Lande

DETAIL INKED BY

R. G. Hickson 10-25-34  
R. G. Hickson  
E. J. Anderson  
E. J. Anderson

AREA OF DETAIL INKED: 24.5 Sq. Statute Miles

LENGTH OF COASTLINE: None.

LENGTH OF SHORELINE: (More than 200 m from nearest opposite shore) 16.7 St. Miles.

LENGTH OF STREAMS: (Less than 200m from nearest opposite shore) 21.6 St. Miles.

## GENERAL INFORMATION

### Statistics:

This sheet covers a total land area of 24.5 square statute miles.

There is no coastline on this sheet.

The length of shoreline as measured along rivers more than 200 meters in width from the nearest opposite shore is 16.7 statute miles.

The length of shoreline as measured along rivers and streams less than 200 meters in width is 21.6 statute miles.

### Reports:

There is no general report on the area covered by this sheet.

Except in some areas along the shores of streams the area covered by this sheet is high sandy ground. Pine trees predominate in practically all wooded areas. Along the Cape Fear River shores there is some cypress swamp. On the west side of the Cape Fear River along the shores of Brunswick River, Redmond Creek, and North West Branch there are strips of fresh water marsh. In former days these areas were under cultivation as rice fields.

### Photo Numbers:

This sheet was compiled from photographs No. 804 to 825, taken by the Army Air Corps Five Lens Aerial Camera A.C. - 32 - 1 on September 25, 1933 at 3:30 P.M. one hour after a high tide of 3.2 feet. These photos were taken along Lat.  $77^{\circ} 57'$  between Long.  $34^{\circ} 10'$  and Long.  $30^{\circ} 17'$ .

## CONTROL

### Sources:

Triangulation by C. D. Meaney, 1932, C. L. Garner 1918, W. C. Hodgkins 1917, and G. D. Granger 1908.

There were no aluminum control sheets made in 1933-34 covering this area.

The control has been reduced to N. A. 1927 datum.  
*Datum station is adjusted same.*

### Errors:

No errors were found in the control by the photo plot.



## COMPILATION

### Method:

The standard radial line method as described in the U. S. C. & G. S. Notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs was used in compiling this sheet.

### Adjustments of Plot:

No unusual adjustments of the radial plot were necessary.

Points common to both the photos used in compiling this sheet and those used in compiling 1:20,000 scale sheet, Register No. 5192, that joins this sheet on the south were radial plotted in to aid in securing an accurate junction between the two sheets.

### Interpretation:

The photographs used in compiling this sheet were clear and very little difficulty was experienced in interpreting the detail except in one or two areas.

As it was impossible to accurately differentiate high ground by field inspection notes or by careful inspection of the photographs, it was necessary to estimate the extent of these areas by apparently differing areas of vegetation. Therefore the limits of the cypress swamp areas shown on this sheet are subject to appreciable error.

Also, in other areas not covered by field inspection notes, some difficulty was experienced in determining what was fresh water marsh and what was fairly low but dry grass land.

The shoreline of Greenfield Lake may be somewhat in error as cypress trees grow out into the water, making it impossible to see a definite shore line in many places. Differences in growth of trees was taken as indicating the shoreline. The pavilion at the north <sup>west</sup> end of the lake is reported by the field inspection as being condemned and slated for demolishing in the near future.

The <sup>dotted</sup> ~~dashed~~ line just north of the intersection of Lat.  $34^{\circ} 15'$  and Long.  $77^{\circ} 57'$  and just off the east shore of the river is believed to be a log boom attached at intervals to several piling.

The blueprint of the Port Facilities made by the U. S. Army Engineers shows piling in several places where it is not shown on this sheet. Field inspection notes do not cover these and it was not possible to see them on the photographs.

Market, Third, and Fifth Streets are boulevards with park areas in the center. These areas were not shown because of their small size and because it was desired to keep the street system clear and open.

Paved roads, concrete, asphalt, and tar and gravel macadam are shown as double solid lines, improved dirt, shell, and cinder roads as double dashed lines, and poor dirt roads and trails as single dashed lines.

All main passenger and freight railroad tracks are shown, as well as all spurs. In cases where several tracks are parallel only the outside tracks are shown as it was impossible to show all tracks without exaggerating the width between them.

The street car system of Wilmington is shown as a single solid line. All lines are double tracked except the following single track section:

20th St., between Ferry and Melts Sts.  
 Ferry St., between 20th and 17th Sts.  
 Fourth St., between Howard and Campbell Sts.  
 Dickinson and Tenth Sts., from Fanning St., to car barn between Orange and Ann Sts., Thence east on Ann St. for three block, thence diagonally across the city blocks until it intersects the suburban double track line.  
 Red Cross St., between Fourth and Woods Sts.  
 Ninth St., between Princess and Orange Sts.  
 Orange St., between Ninth and Sixth Sts.  
 Front St., from Castle to Wright Sts., Wright from Front to Third, and Third St., to the end of the line at Sunset Park.

The storage plant of the Pure Oil Co., shown on this sheet was established after the photographs were taken. The extension of the dock and location of the storage tanks was compiled from notes and measurements taken by the field inspection party.

The buildings shown are all the prominent ones along the water front. The most prominent ones along highways and near rail road spurs are also shown.

Burnt Mill Creek, which forms the north and east boundaries of Oakdale Cemetery is covered by overhanging trees and it was not possible to trace its course.

Existing blue prints show narrow alleys bisecting the city blocks in some areas. Because of the difficulty of determining these alleys from the photos and their unimportance no attempt was made to show them.

#### INFORMATION FROM OTHER SOURCES

Information was obtained from the field inspection party.

Blue-prints of the Seaboard Air Line and Atlantic Coast Line Rail Road properties and tracks were used to facilitate the location and numbers of the tracks on the photographs.

A blue-print of the City of Wilmington compiled in the office of J. L. Beaton, C. E., was used to assist in the location of street car lines.

A blue - print of the Port Facilities at Wilmington, made by the U. S. Army Engineers was of some help in interpreting the pictures along the water front.

#### NAMES

The last two blue - prints mentioned above, namely those by J. L. Becton and the U. S. Army Engineers, are being submitted with this sheet in order that the names of the streets, wharfs, and docks, manufacturing plants, and private concerns may be obtained from them instead of copying all of this information on the overlay sheet.

No conflicting names were recorded by the field inspection party. (See Review and Name Sheet.)

The names on the overlay sheet were taken from Chart No. 425.

#### COMPARISON WITH OTHER SURVEYS

##### Junctions:

Junction with sheet No. 40 Reg. No. 5192, on the South was satisfactory. *There are no other junctions with contemporary air photo sheets.*

##### Discrepancies:

Triangulation station CLARKS ISLAND RANGE FRONT LIGHT BEACON 2, given in the Light List as CLARKS ISLAND FRONT, F.W., was wrecked and rebuilt. Its new position was obtained by radial plot and is given in the list of landmarks submitted with this sheet.

Most of the area shown as grassland on Chart 425 is in reality fresh water marsh.

The shore line of Greenfield Lake as shown on Chart 425 is in error.

On Chart 425 north of Lat.  $34^{\circ} 13'$  and West of Long.  $77^{\circ} 58'$  the courses of some of the streams shown are in error, <sup>they</sup> ~~and~~ are correct as shown on this sheet.

#### LANDMARKS

A list of landmarks and their positions as obtained by radial plotting is submitted on form 567 with this sheet.

#### REMARKS

##### Data on bridges:

Location	Type	Horizontal Clearance	Vertical Clearance. Closed, mean low water.
Highway Bridge over Northwest Bascule Branch Cape Fear River.		38.2 meters ( 125. feet. )	9.4 meters ( 30.8 ft. )

Highway Bridge over North East Branch Cape Fear R.	Bascule	46.2 meters (151.5 feet.)	9.5 meters (31.1 ft.)
Rail Road Bridge over North East Branch Cape Fear R.	Bascule	30.4 meters (99.7 feet)	3 meters (9.8 ft.)
Highway Bridge over Smith Creek	<del>Twin</del> <sup>Fixed</sup> Bridge,	13.8 meters (35.4 feet)	2.8 meters (9.2 feet)
Highway Bridge over Alligator Creek	Fixed Span	- - - - -	2.9 meters (9.5 ft.)

These bridges are not mentioned in the present edition of the Coast Pilot.

#### RECOMMENDATION FOR FURTHER SURVEYS

The compilation of this sheet is believed to have a probable error of not more than 3 meters in position of well defined detail of importance for charting and of not more than 6 meters for other data.

To the best of my knowledge this sheet is complete in all detail of importance for charting purposes, within the accuracy stated above, and no additional surveys are required.

Assisted by:

*E. H. Kirsch*  
E. H. Kirsch.

Submitted by:

*R. G. Hickson*  
R. G. Hickson.  
*E. J. Anderson*  
E. J. Anderson.



DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY

## LANDMARKS FOR CHARTS

Charleston, S. C.November 7, 1934., 193

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:

*E. H. Kirsch*

E. H. Kirsch,

Chief of Party.

DESCRIPTION	POSITION						METHOD OF DETER- MINATION	CHARTS AFFECTED	
	LATITUDE			LONGITUDE					DATUM
	°	'	D.M. METERS	°	'	D.P. METERS			
* TANK (ELEVATED), Silver (3) (125 Ft. high, Texas Oil Co.)	34	11	(1046.36) 802.35 (236.87)	77	57	(1304.40) 232.10 (1073.53)	NA 1927	Radial Plot Radial	425
<del>(3) TOWER (45 Ft. high)</del>	<del>34</del>	<del>12</del>	<del>1611.84</del>	<del>77</del>	<del>57</del>	<del>42.67</del>	<del>"</del>	<del>Plot</del>	<del>425</del>
TANK (ELEVATED) (75 Ft. high (3) Bellwill Mill)	34	13	(1019.00) 829.71	77	56	(85.92) 1449.98	"	Radial Plot	425
STACK, brick, circular (3) (100 ft. high)	34	13	(810.97) 1037.74	77	56	(17.04) 1518.86	"	Radial Plot	425
* STACK (TALLEST OF THREE) brick (3) (200ft. high, Δ Highest stack)	34	13	(619.8) 1223.9	77	57	(1481.9) 54.0	"	Δ	425
* BUILDING (TANK) (Cape Fear (3) Hotel) chart outline	34	14	(1368.60) 430.12	77	56	(151.01) 1384.56	"	Radial Plot	425
TANK (ELEVATED) (100 ft. (3) high)	34	14	(1180.28) 668.44	77	57	(1476.88) 58.72	"	Radial Plot	425
* TANK (ELEVATED) <del>black</del> (120 ft (3) high, S.A.L. Term. Whse, S.A.L. Wharf Greentank)	34	14	(416.9) 1431.8	77	57	(1321.4) 214.2	"	Δ	425
(3) STACK, iron, circular (90 ft. high)	34	15	(1147.28) 701.45	77	56	(8.96) 1526.34	"	Radial Plot	425
* TANK (ELEVATED) black (150ft. (3) high; Δ Wil. W. Tank)	34	15	(970.8) 877.9	77	56	(275.5) 1259.8	"	Δ	425
TANK (ELEVATED) silver (100ft. high; Δ Wil. W. Tank)	34	16	(1796.9) 51.8	77	57	(1200.7) 334.3	"	Δ	425
Original copy mailed to the Director, November 7th, 1934.									

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.

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

## LANDMARKS FOR CHARTS

Charleston, S. C.

November 7th, 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:

E. H. Knack

E. H. Kirsch

*Chief of Party.*

DESCRIPTION	POSITION					METHOD OF DETERMINATION	CHARTS AFFECTED
	LATITUDE		LONGITUDE		DATUM		
	° ' "	D.M. METERS	° ' "	D.P. METERS			
ST. JAMES CH. SP.	34 14	(1643.8) 204.9	77 56	(357.6) 1178.0	NA 1927	△	425
<p>We believe that ST. JAMES CHURCH SPIRE, now located on Chart No. 425 as a landmark, should be deleted from the chart, as it is one of the lowest spires in the city. It is not in reality a spire but a rather low square tower.</p>							
<p>Original copy mailed to the Director, November 7th, 1934.</p>							

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, flagstuffs and like objects are not sufficiently permanent to chart.



## LANDMARKS FOR CHARTS

Charleston, S. C.

November 7, 1934.

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

E. H. Kirsch.

*Chief of Party.*

[illegible]

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, flagstuffs and like objects are not sufficiently permanent to chart.

REVIEW OF AIR PHOTO COMPILATION NO. *T-5191*

Chief of Party: E. H. KIRSCH

R.G.Hickson  
Compiled by: E.J.Anderson

Project: HT 162

Instructions dated: Nov. 10, 1933

1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b,c,d,e,g and i; 26; and 64) ✓
- 2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 26; and 66 g,n) ✓
3. ~~Ground surveys by plane table, sextant, or theodolite have been used to supplement the photographic plot where necessary to obtain complete information, and all such surveys are discussed in the descriptive report. (Par. 65; and 66 d,e)~~  
*None submitted.*
4. Blue-prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charts. (Par. 28)  
*Blue prints and maps used were not transmitted. L.A.M.*
5. Differences between this compilation and contemporary plane table and hydrographic surveys have been examined and rectified in the field before forwarding the compilations to the office and are discussed in the descriptive report.
6. The control and adjustment of the photo plot are discussed in the descriptive report. Unusual or large adjustments are discussed in detail and limits of the area affected are stated. (Par. 12b; 44; and 66 c,h,i) ✓
7. High water line on marshy ~~and mangrove~~ coast is clear and adequate for chart compilation. (Par. 16a, 43, and 44) ✓

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Refer also to the pamphlet "Notes on the Compilation of Planimetric Line Maps from Five Lens Air Photographs."



Only the bridges over Smith Creek are listed in the U.S. Engineers "List of Bridges." For the highway bridge over this creek the high water clearance is given as 4.5 feet.

L.C.M.

The name "Eagle Island" is discussed on the form for names attached to this report. The charts (425 and 1235) are in conflict as to how this name should be spelled. "Eagle Island" will be shown on this sheet pending a decision by Mr. Bacon.

L.C.M.

3/18/35.

V.B.G. Jones

8. ~~The representation of low water lines, reefs, coral reefs and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41)~~ *No low water lines shown.*
9. ~~Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1933, and circular 31, 1934. (Par. 29, 30, and 57)~~ *None submitted.*
10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and 60) *Copy of landmarks attached to this report.*
11. All bridges shown on the compilation are accompanied by a note stating whether fixed or draw, clearance, and width of draw if a draw bridge. Additional information of importance to navigation is given in the descriptive report. (Par. 16c) ✓ *See opposite page.*
12. Geographic names are shown on the overlay tracing. The accepted local usage of new names has been determined and they are listed in the report, together with a general statement as to source of information and a specific statement when advisable. Complete discussion of place names differing from the charts and from the U. S. G. S. Quadrangles is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and 66k) *See opposite page.*
13. The geographic datum of the compilation is *N.A. 1927* and the reference station is correctly noted. *Datum sta is adjusted.*
14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j)
15. The drafting is satisfactory and particular attention has been given the following:
  1. Standard symbols authorized by the Board of Surveys and Maps have been used throughout ✓ except as noted in the report.
  2. The degrees and minutes of Latitude and Longitude ✓ are correctly marked.

*Comparison with other Surveys.*

T-447 (1853) ; T-448 (1853) T-1463 (1878)  
T-4041 (1923) . Each of the above surveys cover either  
all or a portion of this compilation. There are  
numerous man-made changes, especially in the immediate  
vicinity of Wilmington. This compilation supersedes  
the above mentioned surveys for the area they have in  
common with the compilation.

Lam.

3/18/35

v B. G. Jones

3. All station points are exactly marked by fine black dots.
4. Closely spaced lines are drawn sharp and clear for printing.
5. Topographic symbols for similar features are of uniform weight.
6. All drawing has been retouched where partially rubbed off.
7. Buildings are drawn with clear straight lines and square corners where such is the case on the ground.

(Par. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48)

16. No additional surveying is recommended at this time.

17. Remarks: *See opposite page.*

18. Examined and approved;

*E. H. Knech*  
Chief of Party

19. Remarks after review in office:

*See following page.*

Reviewed in office by: *Leonard A. Mulsam*  
*B. G. Jones*

Examined and approved:

*K. T. Adams*  
Asst Chief, Section of Field Records  
*L. O. Polk*  
Chief, Division of Charts

*F. S. Borden*  
Chief, Section of Field Work  
*G. H. Hilde*  
Chief, Division of Hydrography  
and Topography.

North Carolina

Diagram No. 1235

Under investigation. Q

M-136