

5192

U. S. COAST & GEODETIC SURVEY  
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Form 504  
Rev. Dec. 1933  
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Air  
Photo

Topographic  
~~Hydrographic~~

Field No. 40

Sheet No. Reg. No. 5192

State North Carolina

LOCALITY

CAPE FEAR RIVER

~~LILLIPUT CREEK TO MALLORY CREEK~~

Big Island  
Campbell Island

1934

CHIEF OF PARTY

E. H. KIRSCH

U. S. GOVERNMENT PRINTING OFFICE: 1934

5192

Sheet No. 40  
Reg. No. 5192

Photo Nos.  
359 through 375

Date  
January 31, 1933

Time  
10:15 A.M.

PROJECTION BY

L. C. Ripley  
L. C. Ripley

7-19-34

PROJECTION CHECKED BY

E. H. Kirsch  
E. H. Kirsch

7-19-34

CONTROL PLOTTED BY

M. L. Smith  
M. L. Smith

7-25-34

CONTROL CHECKED BY

L. C. Lande  
L. C. Lande

7-27-34

CONTROL PLOTTED ON PHOTOS BY

J. F. Richardson  
J. F. Richardson

8-10-34

CONTROL CHECKED ON PHOTOS BY

L. C. Lande  
L. C. Lande

8-11-34

TOPOGRAPHY TRANSFERRED BY

P. W. Hund  
P. W. Hund

8-13-34

TOPOGRAPHY CHECKED BY

L. C. Ripley  
L. C. Ripley

8-29-34

SMOOTH RADIAL PLOT BY

L. C. Lande  
L. C. Lande

8-9-34

RADIAL PLOT CHECKED BY

P. W. Hund  
P. W. Hund

8-11-34

SCALE PLOT BY

L. C. Lande  
L. C. Lande

7-18-34

DETAIL INKED BY

P. W. Hund  
P. W. Hund

8-30-34

AREA OF DETAIL INKED: 35.7 Square Statute Miles.

LENGTH OF STREAMS: 21.3 St. Miles (Over 200 meters wide).

LENGTH OF STREAMS: 12.0 St. Miles (Less than 200 meters wide).

LENGTH OF COASTLINE: None.

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. 40

REGISTER NO. 5192 **5192**

State North Carolina

General locality Cape Fear River

Locality Lilliput Creek to Mallory Creek

**Campbell Island**  
**Big Island**

Scale  $\frac{20,000}{7,970} = 1/20,620$  Photographs - Jan. 31, 1933.  
Date of ~~survey~~ **1934**, 19

Compilation - Aug. 30, 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 P. W. Hund

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

Contour, Approximate contour, Form line interval 0 feet

Instructions dated November 10, 1933, 19

Remarks: NONE

## GENERAL INFORMATION

### Statistics:

The total area covered by this sheet is 35.7 St. miles. The Cape Fear River is the only stream more than 200 meters wide, of which 21.3 St. Miles<sup>of Shoreline</sup> appear on this compilation. There are 12.0 St. miles of streams less than 200 meters in width.

### Report:

A great portion of the area included in this compilation is high ground heavily wooded. The remaining portion is made up of fresh water marsh and cypress swamps. A small amount of the high ground has been cleared of trees and is used for farming. In general this area is of the low coastal plain type with slight relief.

### Photographs:

A single line of flight was made to procure the photographs used in this compilation. The center of flight following the western bank of the Cape Fear River closely.

These photographs, 359 through 375, were, in general, fairly good as to scale and tilt, but were not so clear as to detail. They were taken on January 31, 1933 at 10:15 A.M., at average half tide with a U. S. Army Air Corps 5-lens camera.

## CONTROL

### Sources:

The control used in the compilation was established or recovered by various parties of this organization from 1853 to 1933, however it has all been reduced to N. A. 1927 datum.

### Errors:

The following error was found in control when making the smooth radial plot:

	Old Position	New Position
FOURTH EAST JETTY	34° 09' 1348.9m(499.8)	34° 09' 1343.1m(505.6)
RANGE REAR LT. BN. 9	77 57 891.6m (645.5)	77 57 874.8m (662.3)

This new position was determined by the smooth radial plot and was scaled from the celluloid sheet.

This position is now shown on the sheet with a black circle.

In addition to the names listed  
on the opposite page the name Todd  
Creek on chart 1235 at lat.  $34^{\circ} 05.4'$   
long.  $77^{\circ} 55.2'$  has been changed to Mott Creek  
in conformance with a letter from  
Mr. John Marshall of Wilmington, N.C.  
This letter has been turned over to Mr. Bacon  
B. G. Jones

### DISCREPANCIES

No control stations other than those established or recovered by this organization were used in the compilation of this sheet.

### COMPILATION

#### Method:

The standard radial line method was used as described in the U. S. Coast and Geodetic Survey notes on the Compilation of Planimetric Line Maps from 5-lens Aerial Photographs.

#### Adjustment of Plot:

No unusual adjustments were necessary in making the plot or compiling this sheet.

#### Interpretation:

All topographic symbols were taken from the topographic manual, with the exception of the double row of dots bordering Big Island which represent an old dike formerly used for controlling the amount of water in this area for rice growing.

The series of small black circles running westward from control station A (USE) represent the remains of piling formerly supporting a dock, which is no longer there. In like manner, the series of small black circles between Big Island and the western shore of the river represent the remains of piling formerly supporting a bridge between the above mentioned places.

In some cases where there is a cypress swamp bordering the river it was very difficult to determine the high water line from the photographs. However, it is felt that there will be but little departure from that as shown to actual conditions.

There are several large areas which consists of sand, small pines and scrub oak. These have been shown with the conventional symbols for wood land heavily interspersed with sand.

#### Information from other Sources:

Field inspection by Lt. B. H. Rigg, 1934.

#### Conflicting Names:

The present chart (425-July 10, 1934) gives the large island in Cape Fear River, shown on this sheet, the name of Campbell's Island. However, it is known locally as Big Island and the Channel Range in this vicinity are known as the Big Island Upper Range and Big Island Lower Range, hence on this compilation it has been named Big Island.

*See opposite page*

## Remarks:

The bridge on the River Road over Old Town Creek is adraw bridge of the swing type - 3.6 meters wide, swing of 29.2 meters, horizontal clearance of 9.9 meters (open), and vertical clearance (closed) of 1.5 meters at mean high water.

COMPARISON WITH OTHER SURVEYS

## Junctions:

Satisfactory junctions were made with the following:

Sheet No. 39, Reg. No. 5191 on the North

Sheet No.      Reg. No. 5042 on the East.

Sheet No.      Reg. No. 5041 on the South.

On the west the compilation was carried to the limit of the photographs.

## Landmarks:

See attached sheet Form 567. *and about 2 pages of this report. Bgg*

## Remarks:

At triangulation station J (USE) and N (USE) are jetties which act as an aid in preserving the position of the channel. These jetties are shown on chart (425) and field inspection shows they are there, however they were not discoverable on the photographs and therefore could not be shown on this compilation.

There is a portion of the eastern shoreline of the Cape Fear River from  $34^{\circ} 04'$  to  $34^{\circ} 07'$  which is compiled on both sheets 5042 and this sheet. These two compilations do not agree in exact detail, but are very close: and, since a thorough check of this portion showed the shoreline as shown to agree with our photographs it is felt that it should be shown as compiled on this sheet.

The present chart (425-July 10, 1934) shows a bridge connecting Big Island to the mainland.

Field inspection shows that this bridge is no longer in existence and consequently is not shown on this compilation.

The present chart (425-July 10, '34) shows Liliput Middle Beacon 23, but since there was no geographic position of it given and it was not discernible on the pictures it has not been shown on this compilation. It should nevertheless be shown on the final chart.

RECOMMENDATION FOR FURTHER SURVEYS

The compilation of this sheet is believed to be accurate, thorough, and complete for charting purposes and that no additional surveys are necessary. A probable error of not more than .3 millimeters may be found in the detail of importance for charting and not over .6 millimeters in detail of lesser importance.

Assisted by:

*E. H. Kirsch*  
E. H. Kirsch,  
Chief of Party.

Submitted by:

*P. W. Hund*  
P. W. Hund



DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

## LANDMARKS FOR CHARTS

*Charleston, S.C.**Nov. 26<sup>th</sup> 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 DETERMINATION	CHARTS AFFECTED	
	LATITUDE		LONGITUDE		DATUM			
	°	'	D. M. METERS	°		'		D. P. METERS
"3" Fourth E. Jetty Range Ft. Lt. Bn. 8	34	10	424.4	77	57	807.6	Radial Plot <del>NA 1927</del> $\Delta$	425
"3" Back	34	10	464.2	77	58	80.0	"	"
"3" Lower Brunswick Channel Range Ft. Lt. Bn. 7	34	09	1434.2	77	57	1174.8	"	"
"3" Unlighted Bn. 25B	34	08	654.5	77	56	1414.4	"	"
"3" Unlighted Bn. 25A	34	08	217.7	77	56	858.1	"	"
"3" Keg Island Rear Light Beacon 10	34	08	175.7	77	56	147.3	"	"
"3" Front	34	07	1604.0	77	56	171.7	"	"
"3" Big Island Upper Range Rear Light Bn. 12	34	07	1125.3	77	55	1095.2	"	"
"3" Unlighted Bn. 25	34	07	974.0	77	56	284.7	"	"
"3" Big Island Lower Range Ft. Light Bn. 13	34	07	679.0	77	56	28.7	"	"
"3" Big Island Lower Range Rear Light Bn. 14	34	06	1676.7	77	55	1105.1	"	"
"3" Lower Lilliput Channel Rear Lt. Bn. 15	34	05	1374.1	77	55	1062.6	"	"
"3" Lower Lilliput Channel Front Lt. Bn. 16	34	05	369.2	77	55	1285.2	"	"
"3" Orton Cove Upper Range Ft. Lt. Bn. 18	34	04	375.2	77	55	1382.3	"	"
"3" Fourth East Jetty Range Rear Lt. Bn. 9	34	09	1343.1	77	57	874.8	Radial Plot	"

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) off-shore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaves and like objects are not sufficiently permanent to chart.

U. S. GOVERNMENT PRINTING OFFICE: 1933

*original to Dir. Nov. 26<sup>th</sup> 1934*



## REVIEW OF AIR PHOTO COMPILATION NO. T-5192.

Chief of Party: E. H. Kirsch

Compiled by: P. W. Hund

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 made.*
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)
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."



- ~~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 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. Sam.*
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)  
*Furnished - copy 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) ✓
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)
13. The geographic datum of the compilation is *N.A. 1927* and the reference station is correctly noted.
14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j) *(except as noted in the report.)*
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 the last previous  
topographic maps ~~at~~, T14636 (1878),  
T447 (1853), and T4041 (1923) shows  
considerable change in the shoreline.  
The compilation is detailed and ~~is~~  
adequate to infer the older maps  
for the area it covers.

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: T5192 Supplemental (extra sheet showing corrections)  
filed 5/11/37.  
1. Name Corrections 5/11/37

18. Examined and approved;

E. H. Kirsch  
Chief of Party

19. Remarks after review in office: *see opposite page.*

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

Examined and approved:

E. K. Green  
Chief, Section of Field Records  
Lee O. Dolbut  
Chief, Division of Charts

H. B. Bortus  
Chief, Section of Field Work  
G. H. Wade  
Chief, Division of Hydrography  
and Topography.

80-EHS

RRY Bgg KTA  
GIB

December 20, 1934.

To: Lieutenant (j.g.) Emil H. Kirsch,  
U.S. Coast and Geodetic Survey,  
12th. Floor, Francis Marion Hotel,  
Charleston, S.C.

From: The Director,  
U.S. Coast and Geodetic Survey,  
Washington, D.C.

Subject: Air Photo Compilation T-5192

Enclosed is a tracing of your compilation T-5192 which shows triangulation station Fourth East Jetty Front Range Light, 1917. This light was rebuilt in 1927.

You will please advise this office whether you used the 1917 position in making your radial plot. There are numerous control stations in this vicinity and if the radial plot held to the 1917 position the light will be accepted as rebuilt in the same position and will be shown on the compilation as a 1933 air photo location.

If the light was not used in the original plot you will please locate it from the photographs on the enclosed tracing or on a separate celluloid covering only sufficient area to reach the necessary control.

If this light does not show on the photographs no further field work is required.

(Signed) B. S. PATTON

Director.

POST-OFFICE ADDRESS: 12th Floor, Francis Marion Hotel,  
Charleston, S. C.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

5192

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

January 2, 1935

80 KTA  
82 Jones  
1935 JAN - 3 - AM 11:46

To: The Director  
U. S. Coast and Geodetic Survey  
Washington, D. C.

From: E. H. Kirsch, Lieutenant (j.g.)  
U. S. Coast and Geodetic Survey

Subject: Air Photo Compilation T-5192

Reference: Your letter 80-EHS dated December 20th, 1934.

Station Fourth East Jetty Front Range Light 1917 shows clearly on the photographs and it was used in making the radial plot. The following corrections were applied to the 1917 position, which was on N. A. datum to determine the field reduced N. A. 1927 datum position: Lat. -5.3 meters, Long. + 8.3 meters.

The enclosed tracing was placed on the pictures whose numbers are indicated on the tracing. The pictures were fixed with all control except Fourth E. Jetty Range Front Lt. 1917, and cuts were taken to this station. The cuts are indicated on the tracing. The distance that the light was moved when rebuilt in 1927 is apparently an unplotable amount. As suggested in the second paragraph of your letter of above reference, the 1917 position should be accepted for the rebuilt beacon but it should be shown with a circle rather than with a triangle.

E. H. Kirsch

E. H. Kirsch,  
Chief of Party.

Note - The same conditions described in this letter apply to Upper Brunswick Rear Range Light which is shown on the compilation at lat.  $34^{\circ} 11'$  long.  $77^{\circ} 57'$

Date. Feb. 11, 1935

Names approved Feb. 11, 1935.

Diagram No. 1235

\* Approved by the Division of Geographic Names, Department of Interior.

Ⓢ, Not Approved by the Division of Geographic Names, Department of Interior.

R. Referred to the Division of Geographic Names, Department of Interior.

(M 100)



T-5192 Supplemental

Graphic Control Survey T.6527 (4/7/37)

This Graphic Control Survey has been compared with T.5192 and all detail within the area added to a supplemental copy of T.5192 except for the location of Beacons.

L. C. Lande  
5/18/37