

5573

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

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Acc. No. _____

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

DESCRIPTIVE REPORT

Topographic } Sheet No. 5573
Hydrographic }

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

APR 23 1936

Acc. No. _____

State North Carolina

LOCALITY

Alligator and Pungo River Canal

Alligator River

Alligator and Pungo River Canal

Alligator River Entrance

~~1935~~
Date of Photographs Oct 1934.

CHIEF OF PARTY

S. B. Grenell

U. S. GOVERNMENT PRINTING OFFICE: 1934

5573

add names as work.

Applied to chart 831 Nov. 4, 1936. H.M.C.
Applied (in part) to Chart Correction 1231 Feb. 23, 1937. H.E.M.

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. 5573

REGISTER NO. 5573

State North Carolina

General locality Alligator River
Alligator and Pungo River Canal

Locality Alligator River ENTRANCE

Scale 1:10,000 * Date of Photos survey October, 1934

Vessel Airphoto Comp. Party # 18

Chief of party S. B. Grenell

Surveyed by U. S. Army Air Corps

Inked by W. C. Oliver, Draftsman

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

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

Instructions dated December 14, 1934

Remarks:

* Seal of Blueprint 1:9560

NOTES ON COMPILATION

One copy of this form must accompany each chart from beginning to completion. The last draftsman, whose name appears on this form, is responsible for it and all personnel will endeavor to keep these forms up to date and correctly posted. This form is very important inasmuch as the final Descriptive Report of the Chart compiled is based upon the information contained herein.

SHEET NO. 5573

M-80
 PHOTO NO. 104 TO PHOTO NO. 132

	BY	START	FINISH
ROUGH RADIAL PLOT	<u>S. B. Grenell</u>		
SCALE FACTOR	<u>(1.046 J. C. Tison, Jr.</u>		
SCALE FACTOR CHECKED	<u>S. B. Grenell</u>		
PROJECTION	<u>Projection machine, Washington office</u>		
PROJECTION CHECKED	<u>S. B. Grenell</u>		<u>10-2-35</u>
CONTROL PLOTTED	<u>S. B. Grenell</u>		<u>10-3-35</u>
CONTROL CHECKED	<u>J. C. Tison, Jr.</u>		<u>10-3-35</u>
TOPOGRAPHY TRANSFERRED	<u>NONE</u>		
TOPOGRAPHY CHECKED	<u>"</u>		
SMOOTH RADIAL LINE PLOT	<u>S. B. Grenell</u>	<u>10-4-35</u>	<u>10-8-35</u>
RADIAL LINE PLOT CHECKED	<u>ditto</u>		
DETAIL INKED	<u>W. C. Oliver</u>	<u>10-9-35</u>	<u>11-14-35</u>
AREA DETAIL INKED	<u>22.1</u>	sq. Statute Miles	
LENGTH OF SHORELINE OVER 300 m.	<u>25.3</u>	Statute Miles	
LENGTH OF SHORELINE UNDER 300 m.	<u>2.3</u>	Statute Miles	
GENERAL LOCATION	<u>North Carolina, Alligator and Pungo River Canal.</u>		
LOCATION	<u>Alligator River</u>		
DATUM STATION	<u>ENTRANCE</u>	<u>1935</u>	Latitude <u>35 - 40 - 01.39</u> (42.8 m.)
	<u>Datum: N. A. 1927</u>		Longitude <u>76 - 06 - 16.00</u> (402.4 m.)

+ See also Descriptive report T-5567 for a general report of this area.

Ram.
4/3/36.

△ Station Camp (U.S.E. 1928) 1935 recovered by R.P. Eymann in 1935. was plotted in this office checked by R.M. Berry.

Camp (U.S.E. 1928) 1935. $35^{\circ} 40' 37.965$ (1170.1 m.).
 $76^{\circ} 03' 24.032$ (604.3 m.).

Ram

*

Refer to pages 5 to 8, report for compilation T-5550. for a discussion of camera errors in the photographs of this area and the need for more than the usual amount of ground control.

In view of the abundance of well placed triangulation control stations the error of plotting is estimated to be from 0.5 to 1.0 mm for intersected points on this compilation. The position of intermediate details may be from 0.8 to 1.5 mm in error.

Ram.
4/3/36.

Cypress Shoreline

On this compilation, where the shoreline is shown by the cypress symbol only, the ground is generally flooded.

The short sections of shoreline in cypress areas which are shown by the standard solid high water line are places where the ground is not flooded at high water.

There are often narrow strips of high ground bordering the shore and behind them the swamp is flooded.

The notes on the field inspection photos covering these sections of high water lines on cypress are not complete and have been supplemented by the compiler's personal field examination. The chief of the compilation party in a discussion in this office has stated that these sections of firm ground as defined by the solid line have been inspected and drawn with considerable care. However, in using surveys of these cypress areas, consideration should be given to the fact that differences in ground elevation are slight. In such areas it is difficult to distinguish between ground generally flooded and ground above high water. ^{as the} change is often gradual and is not marked by a distinct line on the ground.

~~The marsh in this area has been handled differently than the cypress. The solid high water line shown around the marsh indicates the edge of grass visible at mean high water and is not intended to indicate whether the ground is or is not covered at mean high water.~~

B. G. Jones
6/14/37

REPORT OF COMPILATION

NO. 5573 †

Scale: 1:10,000

Scale Factor: 1.046

RADIAL LINE PLOT:

This compilation, scale 1:10,000, is surrounded on the north, east and south by compilation 5569, scale 1:20,000. The photographs for 5569 cover a large area of this compilation so the plot for 5569 was run through first and all radial points cut in as usual. The next step was to transfer some carefully selected radial points from 5569 to this compilation with the enlarging projector. The radial plot of this compilation was then run through in the usual manner and the transferred points cut in over the transferred positions as a check. These points checked in excellently thus verifying the accuracy of the two plots in the area jointly covered.

There was ample control for the radial plot even though three stations were obviously pricked in error on the photographs. These stations were TURN 2, TRAM and ENTRANCE and were pricked directly on the photographs because there were no available tie points in the dense cypress. Other stations - particularly on the outer wings - were pricked wrong on some prints due to overhanging trees.

*
The plot was run through with no more than the usual difficulty encountered on this project due to faulty photographs. The general accuracy of the plot ~~is~~^{is} believed to be up to the standard for the project.

Triangulation control stations on this compilation were established by R.P.Eyman, in 1935 and by K.G.Crosby, in 1935. Lam.

INTERPRETATION OF DETAIL:

The compilation is covered by a single flight of very clear photographs and all definite detail is well defined and easy to interpret. With the exception of the system of roads, canals and ditches in the north west corner of the compilation, there is no other important detail except the shoreline.

This shoreline offers an unusual problem in delineation. A photograph was forwarded to the Washington office with a request for information as to what symbol to use. A sketch was returned showing the shoreline as it appears here with a fine, cypress symbol and no solid line. With the exception of a few short stretches of marshy fringe outside the cypress, the shoreline is merely the indefinite line where the open water ends and the cypress begins. These cypress trees are growing in shallow water which extends inland for an indeterminate distance.

On clear prints of 1:10,000 scale each separate cypress clump along the outer edge can be picked up with the stereoscope. These single, offlying clumps have been carefully compiled and shown with a single, small cypress symbol. It is interesting to note that the hydrographic signals, located on

these offlying cypress trees and cut in by triangulation, often fell exactly in the center of the symbols on the compilation when the "shoreline" was transferred by the projector to Commander R. P. Eymann's smooth hydrographic sheets. This agreement is an excellent check on the accuracy of the compilation.

Many of the roads in the cultivated area are paralleled by canals which are as wide or sometimes wider than the roads. This feature has been shown by triple, parallel lines with notes on the overlay sheet to distinguish the road from the canal. The houses and ditch systems have been shown as accurately as possible.

The area from the cultivated section eastward to the edge of the compilation is a dense, unbroken swamp. The fringe of this area bordering the river is almost solid cypress and gum but further inland there are areas of semi-fast land supporting a mixed growth of ~~pine~~^{demarcation}, oak and deciduous brush. There is no definite line of ~~demarcation~~ between the flooded swamp and the semi-fast land so this change can be approximated only by breaking off the water lining in some sections.

The fringe of cypress south of the river is much narrower as indicated in the scattering second growth symbol in areas recently burned over. Large sections of this semi-swamp frequently burn for months during a dry year. The ground is of peat formation and smoulders along until extinguished by rains or flood.

SPECIAL SYMBOLS:

Note the cypress "shoreline" and reference to authority for this symbol explained in preceding paragraphs.

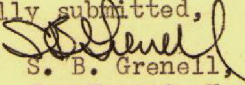
PLACE NAMES:

Well established local names:

- STUMPY CREEK ✓
- STUMPY CREEK BAY ✓
- TUCKAHOE POINT ✓
- GEORGIA BAY ✓
- WINDS BAY ✓
- CYPRESS POINT (not as charted)
- GRASSY POINT (erroneously charted as Cypress Point)
- POINT LOOKOUT ✓
- PINEY POINT ✓
- SCOUTS BAY ✓
- GUM NECK CREEK ✓
- GUM NECK LANDING ✓
- BONNET POINT ✓
- CHERRY LANDING ✓

Charted names:

- BEAR POINT ✓
- DEEP POINT ✓
- NEWPORT NEWS ✓
- ALLIGATOR RIVER ✓

Respectfully submitted,

 S. B. Grenell,
 Jr. H. & G. E.,
 Chief of Party.

Remarks

Decisions

1		
2		
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9		
10	<i>Charted, but incorrect. See DR.</i>	
11	<i>Point charted as grassy Pt. See DR.</i>	
12		
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GEOGRAPHIC NAMES

Survey No. **T-5573.**

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List			
<u>Alligator River</u>	1228 1231									1	
<u>Newport News</u>	1231									2	
<u>Bear Point</u>	1231									3	
<u>Deep Point</u>	1231									4	
<u>Stumpy Creek</u>				✓						5	
<u>Stumpy Creek Bay</u>				✓						6	
<u>Tuckahoe Point</u>				✓						7	
<u>Georgia Bay</u>										8	
<u>Winds Bay</u>				✓						9	
<u>Cypress Point</u> Point				✓						10	
<u>Grassy Point</u>				✓						11	
<u>Point Lookout</u>				✓						12	
<u>Piney Point</u>				✓						13	
<u>Scouts Bay</u>				✓						14	
<u>Gum Neck Creek</u>				✓						15	
<u>Gum Neck Landing</u>				✓						16	
<u>Bonnet Point</u>				✓						17	
<u>Cherry^{RIDGE} Landing</u>				✓						18	
<u>ALLIGATOR R. - PUNGOR. CANAL</u>										19	
<u>Rattlesnake Bay</u>										20	
										21	
										22	
										23	
										24	
										25	
										26	
										27	

Used in report approved
by *G. Ogden* on 3/26/36

REVIEW OF AIR PHOTO COMPILATION T 5573 (1934)
Scale 1:10,000

Comparison with Graphic Control Surveys

T 6370b (1935), 1:10,000 - There are no discrepancies between T 6370b and this compilation. All detail on T 6370b is shown on this compilation over the common area except non-recoverable plane table positions and the magnetic declination.

T 6371 (1935), 1:10,000 - There are no discrepancies between T 6371 and this compilation except at the entrance to the Alligator and Pungo River Canal at $35^{\circ} 40'$, $76^{\circ} 06.2'$, where there is a 14 meter scaled difference of shoreline of the channel. The shoreline of the compilation agrees with the photos here. There is also a difference of interpretation of vegetation at this place; where the compilation shows a symbol for bushes on dry ground T 6371 shows a salt marsh symbol.

The piles and the wreck at Deep Point, recoverable station SAWYER R M No. 2 at lat. $35^{\circ} 42.2'$, long. $76^{\circ} 08.5'$ and all stakes in the Alligator River have been transferred in this office. Checked by R. M. Berry. All details on T 6371 are shown on this compilation except non-recoverable plane table positions, the magnetic declination and short sections of swamp high water lines. *(See next page for comparison with T-6370a)*

Comparison with Previous Topographic Surveys

T 285 (1849), 1:20,000 - The survey T 285 covers the southern portion of the Alligator River. In the vicinity of Newport News between latitudes $35^{\circ} 40.3'$ and $35^{\circ} 42'$ (N.A. 1927 datum) T 285 shows a strip of marsh along the Alligator River averaging 100 meters in width. This marsh is now covered with cypress trees. T 285 is superseded by this compilation over the common area.

H 1315 (1876), 1:20,000 - This is a hydrographic reconnaissance survey which locates the high water line of the part of Alligator River which it covers. The topographic details on H 1315 is superseded by this compilation over the common area.

T 3437 (1914), 1:20,000 - The survey T 3437 covers the Alligator River from Bear Point to lat. $35^{\circ} 49'$. In contrast to this compilation T 3437 shows a continuous high water line around the cypress swamp which forms the edge of the Alligator River. The high water line cannot be shown everywhere on this compilation. The reasons are given on page 1 of this report under "Interpretation of detail".

The pier and sections of roads at Bear Point and the buildings at Deep Point are no longer in existence. T 3437 is superseded by this compilation over the common area.

Comparison with New Hydrographic Surveys

H 5914 (1935), 1:10,000; H 5915 (1935), 1:10,000

There are no discrepancies between H 5914, H 5915 and this compilation.

Comparison with Charts Nos. 1231, 3252

The report for this compilation does not mention landmarks. The descriptive reports, T 6370b and T 6371 state that there are no landmarks in this area except the lights in the river. The number of these lights ^{has} been changed since ^{its} position was determined by triangulation. According to information furnished by U. S. Lighthouse Service ^{its} position has not been changed. The new number ^{is} shown on the compilation in parenthesis after the station name. ^{This} change of number has been reported in the Notices to Mariners, January 1936 but the new number ^{is} not shown in the Light List for 1936. *The other lights which occur in this area have also been assigned new numbers. These have not been located by triangulation however.*

On Chart 3252 at Deep Pt. there is a section of what appears to be a railroad. This is now abandoned. The small pier at Bear Point is gone.

April 14, 1936.

Lernard A. McIsaac

Comparison with Graphic Control Surveys (cont'd)

T-6370a (1935) 1/10,000. There are no discrepancies between T-6370a and this compilation. All detail on T-6370a is shown on this compilation except non-recoverable plane table positions and a short section of swamp high water line. The area of this compilation covered by T-6370a is very small.

*Lam,
4/14/36.*

V. B. Jones

REVIEW OF AIR PHOTO COMPILATION NO. ^F5573.

Chief of Party: *S. B. Grenell* Compiled by: *W. C. Oliver*
 Project: *Party # 18* Instructions dated: *12-14-34*

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. 28, and 66 g, h)~~ *No changes.* ✓
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)~~
Graphic Control Survey T-6371 (1935) covers the greater part of this compilation. Lam. ✓
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)~~
None transmitted ✓
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.
Comparison with Hydro. survey R.P. Eymon, 1935 ✓
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) ✓
See descriptive report for discussion of H.W.L. on cypress swamp coast. Lam.

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." m-67

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)~~ ✓
None 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)
~~Form 524 submitted by R.P. Eymon, 1935~~
No recoverable objects have been described in this area ✓
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)
Form 567 by R.P. Eymon, 1935. Covers the non-floating aids to navigation. There are no landmarks in this area. Same. ✓
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)
No bridges over navigable waterways ✓
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) ✓
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. ✓

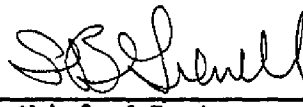
3. All station points are exactly marked by fine black dots. ✓
4. Closely spaced lines are drawn sharp and clear for printing. ✓
5. Topographic symbols for similar features are of uniform weight. ✓
6. All drawing has been retouched where partially rubbed off. ✓
7. Buildings are drawn with clear straight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

18. Examined and approved; 2-5-36



Chief of Party

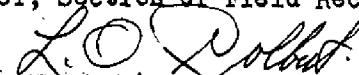
19. Remarks after review in office:

Reviewed in office by: Leonard A. McNamee April 14, 1936.
B. G. Jones

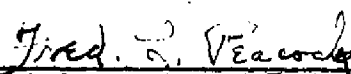
Examined and approved:



Chief, Section of Field Records



Chief, Division of Charts



Chief, Section of Field Work



Chief, Division of Hydrography and Topography.