5550

Includes General Report for T 5550 to T 5566
Pungo River to Adams Creek
Pamlico River
N. C.

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

DESCRIPTIVE REPORT

Topographic / ~~*Hydrographic*~~ } *Sheet No.* T-5550

State North Carolina

LOCALITY

~~North Carolina East Coast~~

Pungo River

Broad Creek.

1935

CHIEF OF PARTY

S. B. Grenell

U.S. GOVERNMENT PRINTING OFFICE: 1934

5550

Applied to chart No. 832 Jan. 1937
R.L.J.
Applied (in part) to chart Correction 1231, April 9, 1937 H.E.M.

GENERAL REPORT

by

CHIEF OF PARTY No. 18

AIRPHOTO COMPILATIONS - NORTH CAROLINA

1935

Covering Compilations

5550 to 5566

H B Shenell

* No date given for the field inspection, most of which was probably done between mar 1935 and Feb 1936. The dates of supplemental surveys as shown in the map titles are the dates of the graphic control (planetable) surveys in this area on maps T5564 to T5566 inclusive there were no graphic control surveys and the title note has been dated 1935 with no month stated

BG Jones

GENERAL REPORT
by
CHIEF OF PARTY No. 18

AIRPHOTO COMPILATIONS - NORTH CAROLINA

1 9 3 5

The purpose of this report is to outline and explain the general features of the project, the organization and operation of the field unit, and other unusual features which are not fully discussed in the compilers reports. This report covers the seventeen (17) compilations, 1:10,000 scale, 5-lens, Nos. 5550 to 5566 inclusive extending along the Inside Route from the north end of Pungo River to the south end of Adams Creek.

FIELD INSPECTION:

The field inspection was carried on with the regular party complement plus a launch engineer and cook to operate the leased launch "JEAN". This launch could house eight people and was generally operated for one week periods from the base at Belhaven, North Carolina. In addition to the launch party, one or two truck parties were operated from either the office or launch to pick up stations not accessible from the water.

In addition to locating control stations on the photographs, the field party made a careful inspection of all land areas adjacent to the waterways and made detailed notes on the photographs to aid the compilers in identifying and correctly delineating all topographic features of importance. Detailed notes were also made concerning the type of forest and vegetation in general with careful estimates as to the percentage of various trees such as pine, oak, gum, cypress etc.

After all control had been tied in to the photographs a two-man party covered the entire area in a truck making a careful check of all names to be shown on the compilations; verifying names from the charts and old topographic sheets and checking the spelling of new place names and determining how well these names are known locally and over how wide a territory.

All names have been put into four general classifications, as follows, and are listed in the descriptive report for each compilation under the separate headings.
CHARTED NAMES:- Those appearing on current issues of charts.
OLD TOPOGRAPHIC NAMES:- Those appearing on old Coast Survey topographic sheets and Geological Survey quadrangles.
WELL ESTABLISHED LOCAL NAMES:- Names appearing on no maps or charts which are well known and used over a wide area.
LOCAL NAMES:- This generally applies to unimportant features such as small bays and streams, swamp areas and unimportant landings which are known by name in the immediate vicinity only.

The truck parties also secured data on small fixed bridges not listed in the Bridge Book, U.S.E.D., 1927 edition and checked the spelling of names of small cross - road settlements and determined the existance and location of school houses and post-offices - if any. * See note on opposite page

CONTROL:

When this party moved to this locality the existing control consisted of a first order arc by R. D. Horne, 1933, second order schemes by G. C. Mattison, 1932 -33 and schemes in the Bay River and Pungo River by P. C. Whitney, 1914. At approximately the same time this party began field work, three other parties started operations in the area; each one putting in additional control which was available. Most of the P. C. Whitney, 1914 stations have been destroyed but J. A. Bond revised the scheme in the Pungo River and J. C. Bose revised the Bay River scheme bringing these areas up to date. K. G. Crosby ran a second order scheme the

entire length of the project, putting in additional control for the photographs and making connections between the first order arc and other schemes thus making it possible to either compute or adjust this control to the 1927 datum, on which all of the air photo compilations were made.

As discussed later in this report, the photographs were distorted slightly in azimuth and scale making it advisable to put in considerable additional control to discover, if possible, the source and amount of error. To accomplish this, various traverses were run along highways between control stations using six D and R observations with a theodolite and double taping the distances. These traverses checked out with an average of third order triangulation accuracy and furnished excellent control because it was possible to pick such points as road intersections, head walls of bridges etc. which could be pricked, without question, on the photographs.

RADIAL PLOT DIFFICULTIES:

The first radial plot was run through four compilations, 5550 - 5553 in the vicinity of Belhaven, N.C. where there was ample control for plotting under normal conditions. It became evident from the very first that something was radically wrong with the photographs. At the end of this report is attached a copy of a letter dated March 14, 1935 outlining in detail the entire problem and explaining the source and amount of error. In reply to this letter, Lieut. O. S. Reading visited this office and inspected the photographs and progress made and suggested additional traverse control be established in order to furnish more data for the investigation. Additional traverse was run and the compilations replotted. Copies of two letters dated March 25 and April 15 are also attached to the end of this report. These letters explain fully the steps taken and should be referred to by the office reviewers.

The conditions referred to above have existed throughout all of the photographs plotted to date and subsequent radial plots have been handled in the same manner as the first. This condition has slowed up the progress of compilation and has lowered the standard of accuracy of the sheets. It is believed, however, that the adjustment check system used has kept the probable error (maximum) under 2 m.m. with an average considerably lower than this for well established areas.

GENERAL TOPOGRAPHIC FEATURES:

The land areas covered by these compilations are very flat - in a few places only will the elevation exceed 10 feet above mean sea level. The character of the country is very uniform. The forested areas are predominately pine with a scattering of deciduous and undergrowth except in the deep swamps where cypress and gum predominate and pine is found on the higher ridges only.

This section of the country is subject to frequent brush and forest fires, which, together with the extensive logging operations, have thinned out large areas. These areas have been indicated, where possible, by spacing of symbols and by appropriate notes on the overlay sheets.

There are several abandoned standard guage railroads and many abandoned narrow guage logging roads in this area. A few of the latter are operating in part and have been shown with the narrow guage symbol. All abandoned roadbeds where the track has been removed are indicated with sand dot or brush symbol depending on whether or not they are overgrown. This has been done to locate these features in case some of them are later used for highway development - as is frequently the case in this section of the country. The brush and sand-dot symbols have been used in place of the conventional hachures because the embankments are very low and the latter symbol would too greatly exaggerate their importance.

There is no periodic tide in the Pamlico Sound region and the marshes are firm and the stream edges clean cut, being flooded only by the wind tides which vary with the seasons.

COMPARISON WITH CONTEMPORARY SURVEYS:

The compiled area including Pungo River and Bay River has been covered by aluminum mounted topographic sheets executed by the parties of J. A. Bond and J. C. Bose during the first part of this year. Each of these sheets has been carefully compared with the corresponding compilation under the projector and all differences investigated. In some areas where the shoreline is dim or obscured by trees, the compilation have been corrected to agree with the field sheets. In other sections, especially up narrow winding streams, where the topographer was apt to lose his azimuth and where there was no ground control available to the topographer, the compiled shoreline has been held as correct and the field shoreline swung in to agree and the hydrographic signals shifted. Where this has been done, note to that effect has been incorporated in the descriptive report for the field sheet.

After comparisons and adjustments were made, the shoreline was transferred by the projector direct to the smooth hydrographic sheets.

Comparisons were also made between the compilations and charts and photostats of old topographic sheets on hand.

SHORELINE SIGNALS DIRECT FROM COMPILATIONS:

For the most part of the compilaton in this area fell behind the hydrography but several sections were delayed long enough for the compilations to be completed ahead of the hydrography. There were three of these areas as follows: The Pungo River north of Lat. 35 - 33.5; Bay River from Long. 76 - 40 to 76 - 44 and all of Adams Creek from the Neuse River to the canal.

In these areas the hydrographic signals were built by the hydro parties and tied in to the photographs by my field inspection unit and later located on the compilations (in wash color) and transferred along with the shoreline direct to the boat and smooth sheets by use of the projector. This operation in no way held up the compilation and saved the combined operations parties from running in aluminum control sheets of these areas. Several of these smooth sheets have been plotted already and the location of the signals for hydrographic control seems to be on a par with the conventional planetable method.

I believe this system could be carried out for an entire project with excellent results if the compilation could be begun several months in advance of the hydrography.

Respectfully submitted,

S. B. Gre nell
Jr. H. & G. Eng'r.
Chief of Party

COPY

3a

March 15, 1935

To: The Director,
U. S. C. & G. Survey,
Washington, D. C.

From: Lieut. (j.g.) S. B. Grenell,
Chief of Party No. 18,
Washington, North Carolina

Subject: Radial Plot Difficulties.

We have been attempting for the past week to run through the radial plots on compilations 5550 and 5551, Pungo River, North Carolina. These are the first plots attempted on this project and were being rushed to furnish shoreline for the hydrographic parties under J. A. Bond.

From the first it was evident that something was radically wrong. The first step was to check control station picking and mounting. Both of these operations had been carefully executed and nothing was discovered. Repeated attempts were made to carry through the azimuth on fixed pictures - that is on pictures having control in at least three wings. The control is ample and well distributed so that at least every alternate picture is fixed and many pictures had control in all four wings and the "B" print.

It was noted that the control could be held in three wings only and that the points in the fourth wing would fall off approximately 1.5 m.m. in the outer wing. Several plots were run through holding the control in three wings, each time allowing one wing to fall off - i.e. - holding A, B, C. and E one time; A, B, D and E another and so on. The results to date seem to indicate that the flight azimuths through the straight pictures can be held only when the "C" wing is allowed to fall off. This condition also holds fairly well when the "C" wing is held and the "A" wing falls off but the distribution of control is such on the "A" wing side as to indicate that the wing is correct.

The control is so intense and so well distributed as to make certain that the error is not a coincidence in faulty pricking, because when the "C" wing is allowed to fall off, all stations in the wing invaribly fall off in the same direction and approximately the same amount depending on their distance out from the center.

The writer has come to the conclusion that some one wing - probably the "C" wing is in error due to either a lens of the camera being out in collimation or an error in setting the transforming printer. Although it is evident that something is wrong it is very difficult to determing the location, direction and amount of this error so that the proper corrections can be made.

It also appears that the "D" wing has not been enlarged sufficiently because in several instances two control stations appear on the edges of the forward wing or "straight "D" about equidistant from the principal point and on opposite sides and equidistant from the azimuth line and in almost every case the radial lines fall the same distance inside of the control points on the celluloid compilation indicating that the picture is too small. The incorrect amount of displacement in this wing due to tilt confirms the above assumption.

With the pictures as they are it is impossible to run through a radial plot that will check to the required standard. It is therefore respectfully requested

that advice be given as to the procedure to follow in further analysing and correcting these errors.

S. B. Grenell
Chief of Party

July 23, 1935

P. O. Box 613, Washington, North Carolina

March 25, 1935

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

From: Lieut. (j.g.) S. B. Grenell,
Chief of Party No. 18,
Washington, North Carolina

Subject: Remounting Photographs.

Pending the recalibration of 5-lens aerial camera 31-50 as discussed in the Director's letter of March 21, tests have been made in this office to determine the location and amount of calibration error for the photographs on hand.

Lieutenant O. S. Reading visited this party recently to discuss the apparent discrepancy in the photographs and to determine the procedure to follow for correction. At his suggestion two additional traverses have been run to furnish additional control and with this control it has been possible to find a larger number of prints on which several control points fall in all four wings.

Working on the assumption that the error lies in the azimuth of the "C" wing, as discussed with Lieutenant Reading, a check skeleton plot has been run through holding the control in the A, B, D and E Wings and the azimuth as carried through straight D and E wings and checks on skew centers.

From this plot eight photographs were selected - 5 straight and 3 skew - on which there is control in all four wings. These photographs were selected for the distribution as well as the intensity of control and the following results were obtained:

1. In each case the azimuth holds when the control is held in all wings except "C".

2. Control can be held in all wings when the "C" falls off.

3. The "C" wing invariably falls off in the same direction and approximately the same amount under the above conditions.

As illustrated in the attached sketch "A" the distances D and S were measured for each of thirty three (33) stations falling on the "C" wing of the eight (8) photographs selected. From these values the distance X was computed by the ratio noted on the sketch. The mean of the thirty three values was 1.5 m.m. - 15 meters on the scale of the photographs, 1:10,000.

The dashed line in red on sketch "B" shows the direction and amount the C wing is being shifted in remounting. The entire correction is being made at the outer collimation notch; the inner notch is being held at the junction with the B print. On sketch "A" the blue triangles represent the control plotted on the celluloid and the red triangles and radial lines show the position of the C wing when all other control is held. The distance D is measured between the blue triangles and the red radial lines.

The additional traverse control further checked the assumption made that the D wing is out of scale but that the azimuth is correct. Several cases occured where control along the center of this wing held but radial lines through stations falling near the edges of the wing invariably fall inside the control on the celluloid by distances proportional to their distance from the center line of the print. Under maximum conditions this discrepancy seldom exceeds eight (8) meters.

A new plot is being run through compilations 5550 - 51, upper Pungo River, and this plot will be checked against the shoreline and other definite detail rodded in on aluminum control sheets by J. A. Bond. When this check has been made, another report of the results will be forwarded immediately.

S. B. Grenell

POST-OFFICE ADDRESS: P. O. Box 613, Washington, North Carolina

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

7

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

April 15, 1935

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

From: Lieut. (j.g.) S. B. Grenell,
Chief of Party No. 18,
Washington, North Carolina

Subject: Mounting Photographs.

As noted in previous letters, considerable difficulty has been experienced in running radial plots due to the fact that the "C" wing is apparently out in azimuth and the "D" wing out in scale. Lieut. O. S. Reading visited this party and made a study of the difficulties and requested that a report be written after a few sheets were plotted. The radial plot has been run through on seven (7) sheets and the following irregularities noted:

1. The "C" wing falls off in azimuth on some points but not on all. When it does fall off it is always in a counter clockwise direction and in varying amounts up to 1.5 m.m. at the outer collimating notch.

2. The "D" wing is generally, but not always, small; that is, the radial lines fall toward the center from control points falling on opposite sides of the wing and approximately the same distance out from the center.

3. In some sections the condition noted in paragraph 2 applies to the "E" wing but in a few cases only.

The above conditions do not hold consistently but seem to vary with the amount and direction of tilt. This applies particularly to the azimuth discrepancy in the "C" wing.

Almost all of the shoreline on the first seven compilations have been redded in on aluminum control sheets by the party of J. A. Bond and all of this detail has been checked against the compiled shoreline. Where the field sheets were well controlled the shoreline checks exactly. Where the field topographer ran extended traverses up narrow winding creeks the agreement is not so good but this can be attributed to the fact that the azimuth was lost through many short setups. In many cases the compilation has been checked by theodolite and tape traverse stations on highway bridges at the head of these creeks and found to be correct. This traverse was not available to the field topographer and his stadia traverse is left "hanging".

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

The compilations have also been checked against the topographic sheets and the agreement is excellent. The above seems to indicate that the radial plots are correct as adjusted for the discrepancies noted in the numbered paragraphs.

DEPARTMENT OF COMMERCE

U.S. COAST AND GEODETIC SURVEY

In reference to the Director's letter of April 12, 26-AA, 1990 (18) it is requested that three hundred (300) mounting cards be printed on the standard plate and forwarded. Where it is necessary to remount any wing it can be done on offsets from the true mounting diagram. The three hundred cards will be sufficient for all flights south of Albemarle Sound.

S. B. Grenell
Chief of Party #18

Regarding the discrepancies mentioned on the preceding pages 5 to 7:

The error in azimuth of the C wing might be ~~covered~~ caused either by delayed shutter action or by incorrect alignment of the C lens. Since the error is not constant as mentioned on page 7 the shutter seems the most likely cause.

The scale error in the D wing also seems more likely to have been caused by the shutter.

The errors are difficult to place and to compensate for and indicate a need for more frequent check of camera adjustments.

The large amount of control used and the fact that the country is flat tend to minimize the effect of the camera errors.

The estimated accuracy of the photos as given in the several descriptive reports is based on the density of control and checks available with the ground surveys.

B.G. Jones
3/16/36

Form 537a
Ed. Nov. 1929

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.....

REGISTER NO. 5550

State North Carolina

General locality ~~North Carolina Coast Canal~~ Pungo River

Locality ~~Pungo River~~ Brood Creek.

Scale 1:10,000 Date of ~~survey~~ photos. 10-9-34, 19

~~Vessel~~ Air Photo Compilation Party No. 18

Reviewed & recommended for approval:
Chief of party Lieut. (j.g.) S. B. Grenell

Photographs plotted by:
~~Surveyed by~~ F. B. Hickman

Inked by W. C. Oliver

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

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

Instructions dated Dec. 14, 1934, 19

Remarks: Compilation of aerial photos Nos.: M-78 6 to 21; 89 to 102

.....

ers

--NOTES OF COMPILATION-

One copy of this form must accompany each chart from begining to completion. The last draftsman, whose name appears on this form, is responsible for it and all personnell 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. 5550

PHOTO NO. (M-78) 6 (M-78) 89 to PHOTO NO. 21 102

	BY	START	FINISH
ROUGH RADIAL PLOT	S. B. Grenell	2-24-35	2-26-35
SCALE FACTOR (1.00	S. B. Grenell	2-24-25	2-26-35
SCALE FACTOR CHECKED	F. B. Hickman	2-24-35	2-26-35
PROJECTION	A. M. Gruber	2-28-35	2-28-35
PROJECTION CHECKED	S. B. Grenell	2-28-35	2-28-35
CONTROL PLOTTED	F. B. Hickman	3-5-35	3-6-35
CONTROL CHECKED	H. B. Riner	3-6-35	3-6-35
TOPOGRAPHY TRANSFERRED			
TOPOGRAPHY CHECKED			
SMOOTH RADIAL LINE PLOT	F. B. Hickman	3-18-35	4-1-35
RADIAL LINE PLOT CHECKED	S. B. Grenell		4-1-35
DETAIL INKED	W. C. Oliver	4-2-35	5-28-35

AREA DETAIL INKED 25.9 Square Statute Miles

LENGTH OF SHORE LINE OVER 200m. 21.6 Statute Miles

LENGTH OF SHORE LINE UNDER 200m. 25.1 Statute Miles

GENERAL LOCATION ~~North Carolina East Coast~~ Pungo River

LOCATION ~~Pungo River~~ Broad Creek.

DATUM STATION Scranton - 1933 LATITUDE 35 - 29' - 45.961" (1416.5m)

DATUM N. A. 1927 LONGITUDE 76 - 27' - 08.025" (202.3m) (adjusted)

GENERAL COMMENT ON PROJECTIONS FOR SHEETS 5550 - 5551

Having laid out the central meridian perpendicular to the central parallel, measurements were maid for three minutes of longitude. These measurements were made along the central meridian and along the meridians bordering the edges of the celluloid, but when the straight edge was placed across these three scratch marks they were not on a straight line. If the scratch marks on the extreme minute lines were held the mark on the central meridian would fall short about 4 meters toward the center of the sheet.

The same discrepancy was noted when laying out the meridians but not as great as 4 meters.

The measurements were checked and re-checked and a straight edge was placed on the celluloid adjacent to the line to be measured and still the condition existed. It was then decided by Lieut. Grenell to draw lines from scratch marks at the extreme minute line to the scratch marks on t he central meridians and parallels.

This decision causes a slight bend in the lines at the central axes but the measurements of minute lines check with the tabular values.

The above condition was caused by uneven contraction of the center portion of the sheet which left a diamond shaped flat area with the axes parallel to the axes of the sheet. The corners were slightly wrinkled and would "creep" outward from the center when a straightedge was laid parallel to the edge of the sheet.

Note

The method of plotting the C wing independently as discussed on the opposite page amounts to no more than simply enlarging or reducing the photo to the scale of the celluloid and fitting it to ground control. This method is not a radial plot and does not reduce errors in scale due to tilt or relief.

The traverse which runs across the north edge of the sheet and down ~~doen~~ the east side and across the south end along the highways, together with the triangulation furnishes rigid control. Since the country is quite flat and the control closely spaced the effect of camera maladjustments, as discussed on preceding pages 5 to 7 and on the opposite page, is minimized and checks with the planetable control surveys indicate that the accuracy is within the limits stated on page 12 and that shoreline detail is within 10 meters or 1 mm. on the celluloid.

The traverse is not marked and not recoverable and the traverse points are not shown on the printed compilation. The points are marked on the photographs and on the celluloid.

REPORT OF COMPILATION:

RADIAL LINE PLOT:

It was impossible to plot pictures 1 to 23 by the regular method holding all control. Pictures seemed to indicate that the "C" wing was slightly out of place. Measurements were taken holding all but the "C" control from several pictures and from this data a mean value was obtained indicating that the "C" print should move toward the "E" 15 meters. "C" prints on pictures 8 to 28 were moved this amount and plot tried again with no better results. Some pictures would hold all control perfectly while others seemed to indicate "C" should not have moved.

As a last resort the "C" prints having no tilt were plotted independently. This was done by locating the optical center of "C" print and new radial lines drawn. Cuts taken in this manner checked cuts from pictures holding all control.

It is impossible to get cuts from "D" prints except through center of print as this print is out of scale. Stations out in "D" in opposite sides will not hold. Radial lines fall inside of station in each case.

88 to 102 were plotted through before traverse Wilkerson - Scranton - Sladesville was run. Traverse was plotted later and held plot same as original except from 96 to 102. Azimuth was slightly off in this area. This change was easily ironed out and pictures having control in all 4 wings held without "C" being moved. See opposite page

ADJUSTMENT OF PHOTOGRAPHS:

The radial points were well selected and spaced. Excessive tilt was encountered in the south-west corner of the sheet along the junction with compilation 5555. Points were interlaced for the detail in this area. It was necessary to establish additional points in the north west corner of the sheet. The shoreline in this area was needed by the Hydrographic party and additional points were put on by the method of projecting and interlacing points.

INTERPRETATION:

In general the pictures were clear with the detail sharply defined. The rail road bed running north and south along Long. 76 -26.4' (35 - 30') was shown with bush symbols and sand dots because of the dense vegetation on the bed. The more recently abandoned bed in the north-east corner of the sheet running parallel to the concrete road was shown with a double line of sand dots. The old rail road bridge at Lat 35 - 33.4' Long 76 - 25.6 is intact but is not used and is swung out of the way of the canal traffic. The tram roads at Lat. 35 - 30.3' Long 76 - 26 to 27 are shown as a single line of sand dots. The northern most line is still in use but due to the impermanent nature of these trams - they were all shown with the same symbol. The R.R. trestle at Lat. 35 - 34' Long . 76 - 26.8' is intact but is not used. The bridge at Lat. 35 - 31.3, Long 76 - 27.5' has been removed. Heavily wooded areas are put in according to the field party's notes as to the percentage of coniferious and deciduous trees. The groups of piling shown near Lat. 35 - 33.2' Long 76 - 27.7' were taken from Topo sheet T-6337 "A" because of their dimness on the photographs.

COMPARISONS WITH CONTEMPORARY SURVEYS:

The junctions with adjoining sheets were made in this office and are complete and satisfactory. The shoreline was checked against Topo sheet "A" and "B", 1935 by J.A. Bond and small differences probably due to interpretation were made to agree. Topo sheet A is T-6337. Feb. 1935
Sheet B is T-6338. Jan. 1935

COMPARISONS WITH OTHER SURVEYS:

This area is covered by chart 1231 and the shoreline seems to be very much the same. The rail roads, shown as abandoned on this compilation, should be removed from the chart. New roads have been put in and some of the old ones discarded. A comparison has also been made under the projector with a photostatic copy of Topo sheet 1310 - made in 1873. This comparison shows very little change in the main topographic detail. Principal changes are in the amount of cultivated area and the addition of new roads. The changes in datum of the old topographic survey made it impossible to check accurately the geographic position of important detail.

ACCURACY AND COMPLETENESS:

This sheet was compiled with a probable error of less than 10 meters in well defined detail and less than 20 meters in less well defined detail.

PHOTOGRAPHS:

Photo Nos.	Time	Date	Tide
(M-78) 6 - 21	10:45 AM	10-9-34	No tide
M-78 89 - 102	11:00 AM	10-9-34	No tide

BRIDGE DATA:

Location	Lat.	Long	Channel Wdth.	Vertical M.L.W	Vertical H.W.
Broad Creek	35 - 30'	76- 26.9'	Fx. 14'	3.5	2.3
Pungo. River	35 - 34.3'	76 - 30.1'	Sw. ~~34.8'~~ 35ft ~~34.8'~~	5.0	~~4.0~~ 3 ft
Wilkerson Creek	35 - 33.3'	76 - 26.3'	Sw. 80'	9.85	8.85

NEW PLACE NAMES

See next page

NEW PLACE NAMES

W. E. - Well established local name, known throughout a large area.
L. N.- Local name, known in immediate area only.
C. - Charted
O. S. - Appears on old Topo sheet.

Name	Legend	Remarks
Smith Creek ~~Pt.~~	W. E.	
Corkenson Cr. (Caukenson Cr.)	W. E.	Spelling doubtful
Broad Cr. Pt.	W. E.	
Smith Creek	C. - O. S.	
Poster Creek	W. E.	
Broad Creek (Soranton Creek)	C. - O. S.	(Sign on Bridge placed by Hw'y. Dept (Not commonly known as such)
Tarklin Creek (~~Tarklin~~)	W.E. - O.S.	
Galloway Creek	W.E. - O. S.	
Horse Island Creek	L. N.	
Poster Creek	L. N.	
Dip Creek	W. E. - O. S.	(around vicinity of Lower Pt. it is sometimes called Lower Dip Creek)
Wilkerson Creek	C. - W. E.	
Rutman Creek	C. - O. S.	
Hooker Bay	L. N.	
Drum Point	L. N.	
Crabtree Bay	W. E.	
Queen Creek	W. E. - O. S.	
Signal Point	W. E.	(due to an old Hydro Signal having been placed here some 25 years ago)
Soranton P. O. (town)		
Russel Creek	L. N.	Family name
Mt. Olive Creek	L. N.	Not well known as such
Upper Dip Creek now known as Clarke Mill Creek	O. S. W. E.	(In this vicinity this creek runs up to a mill pond known as Clarke Mill pond. A mill known as ClarkeMill was operated thereon)
Leechville P. O. (town)	C.-O. S.	
Styron Creek	W. E.	
Sophie Island	W. E.	
Sophie Id. Creek	W. E.	
Eborn Pt.	L. N.	
The Islands	W. E.	
Bateman Creek	L. N.	
Muse Shore	W. E.	(at one time a family of this name lived here)
Satterthwaite Pt.	W. E. - O. S.	Family name

W.C. Oliver

W. C. Oliver
Draftsman

Field Review:

A. M. Gruber
Surveyor

* Approved for Phots-compilation only. None too well established.

	Remarks	Decisions
1		
2		
3		
4		
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7		
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18	WILKINSON'S CREEK ON T1310.	
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27	SPELLING DOUBTFUL	

M-234

GEOGRAPHIC NAMES

Survey No. T-5550.

Name on Survey	A On Chart No. 1231.	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	
CLARKE MILL CREEK Upper ~~Dip~~ Creek				✓						1
Leechville	✓			✓						2
Pungo River	✓	1310		✓						3
Mt Olive Creek *										4
Russel Creek. *										5
Crabtree Bay				✓						6
Styron Creek.				✓						7
Sophie Island				✓						8
Sophie Island Creek				✓						9
Eborn Point *										10
Signal Point				✓						11
Queen Creek				✓						12
Drum Point *										13
Hooker Bay *										14
The Islands				✓						15
Rutman Creek	✓	1310		✓						16
Bateman Creek *										17
Wilkerson Creek.	✓			✓						18
Dip Creek.		1310		✓						19
Poster Creek										20
Horse Island Creek *										21
Muse Shore				✓						22
Satterthwaite Pt.				✓						23
Galloway Creek				✓						24
Tarkiln Creek		1310		✓						25
Broad Creek Pt.				✓						26
Corkenson Creek				✓						27

Names underlined in red approved by [illegible] on 3/23/56

M 234

GEOGRAPHIC NAMES

Survey No. T-5550

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	
Smith Creek ✓	✓	1310								1
Smith Creek Point ✓				✓						2
~~Foster Creek (2)~~										3
Broad Creek ✓	✓	1310								4
Scranton ✓						✓				5
ALLIGATOR R.-PUNGO R. CANAL	✓									6
										7
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Names underlined in red approved
by C. Haynes on 3/23/36

M 234

	Remarks	Decisions
1		
2		
3	Only one Porter Creek approved. 6th	
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M 234

REVIEW OF AIR PHOTO COMPILATION T 5550 (1934)
Scale 1:10,000

Comparison with Graphic Control Surveys T 6337 and T 6338 (1935), 1:10,000.

T 6337 and T 6338 are in excellent agreement with the compilation detail.

As stated in reports T 6337 and T 6338 the shoreline on the graphic control surveys is shown in pencil and was rodded and sketched with only sufficiont accuracy for use on the boat sheets, the accurate survey of shoreline being left for the compilation. This penciled shoreline agrees with the compilation quite closely, the largest differences being about 1.5 mm. or 15 meters.

The topographic signals on T 6337 and T 6338 and recoverable detail has been carefully located and checks with the compilation with no appreciable differences.

At the head of Smith Creek T 6338 shows a label "Piles" but shows only one pile which has been transferred to the compilation by the field party. This is probably a cluster of piling.

The object shown by dashed lines on the compilation at lat. 35° 33.15', long. 76° 27' was traced from the photographs in this office and its identity is not known. It appears to be a boom of logs which may or may not be permanently moored.

All detail on T 6337 and T 6338 is shown on this compilation except the buoys in Pungo River, the magnetic declination and non-recoverable planetable positions.

Comparison with Previous Topographic Surveys

T 1310 (1873), 1:20,000. The survey for T 1310 covers the upper part of the Pungo River. There are nolarge changes of shoreline here since the time of the survey for T 1310.

South of latitude 35° 29' large wooded areas have been cleared which are now under cultivation. Numerous ditches have been built in and around these cultivated areas.

There are numerous road changes since 1873. The through highway which crossed Tarkiln Creek at 35° 31.3', 76° 27.5' is no longer a through road for the bridge is out where it crosses this creek.

The compilation is complete and adequate to supersede that portion of T 1310 which it covers.

Comparison with Chart No. 1231

The railroads in the vicinity of Wilkerson Creek, the sections of which are shown on this chart are no longer in existence.

The systems of roads shown on this chart, the centers of which are at 35° 33.2', 76° 30' and 35° 34.3', 76° 28.3' (approximate positions) are shown as trails on the compilation. They are narrow private roads.

The road shown on this chart at 35° 33', 76° 29' is now a trail.

Descriptive reports for graphic control surveys T 6337 and T 6338 state that there are no landmarks other than lights and beacons a list of which was submitted in a separate report presumably filed as a chart letter.

All lights on the present chart 1231 in this area are shown on the compilation and were located by triangulation. The present chart shows no beacons in the area of the compilation.

March 12, 1936.

Leonard A. McGann

REVIEW OF AIR PHOTO COMPILATION NO. T-5550

Chief of Party: S. B. Grenell Compiled by: W. C. Oliver

Project: Inland Route North Carolina Instructions dated: Dec 14 1934

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) ✓
Additional control obtained by Traverse
Graphic control surveys T-6337 and T-6338. (1935)

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 ✓

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." 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) ✓

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)
~~Submitted by Lt. J. G. Bond 1935~~
No recoverable objects located but described for 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)
~~Submitted by Lt. J. G. Bond 1935~~
There are no landmarks for charts in this area according to reports T-6337 and T-6338.

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) ✓

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;

S B Linnell
Chief of Party

19. Remarks after review in office:

Reviewed in office by: Leonard A. McGann March 12, 1936.
B.J. Jones

Examained and approved:

E T. Green
Chief, Section of Field Records

Fred. L. Peacock
Chief, Section of Field Work

L O Colbert
Chief, Division of Charts

Rude
Chief, Division of Hydrography and Topography.