Form 804

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey  Air Photographic Topographic

Field No.  Office No.  T-8191

LOCALITY

State  North Carolina
General locality  Brunswick, N. C.
Locality  Bolivia, N. C.

1943

CHIEF OF PARTY
FL. Gallagher and
Fred. L. Peacock

LIBRARY & ARCHIVES

DATE  December 21, 1945
DATA RECORD
T-8191

Quadrangle (II): Bolivia 7½ minute
Project No. (II): GS-28¾

Field Office: Myrtle Beach, S. C.
Chief of Party: F. L. Gallen

Compilation Office: Baltimore, Maryland
Chief of Party: Fred. L. Peacock

Instructions dated (II III): Copy filed in Descriptive Report No. T-(VI)
July 15, Oct. 19, 23 & 27, 1942
July 24, 1943

Completed survey received in office: July 25, 1943

Reported to Nautical Chart Section: Date:

Reviewed: Oct. 8, 1943 Applied to Chart No. Date:

Redrafting Completed: Dec. 7, 1943

Registered: Published: 1944

Compilation Scale: 1:20,000 Published Scale: 1:31,680

Scale Factor (III): None

Geographic Datum (III): N.A. 1927 Datum Plane (III): Mean Sea Level

Reference Station (III): HARVEL, 1932

Lat.: 34° 02' 10.298" 317.3 Long.: 78° 09' 20.522" 526.4 Adjusted
(1531.4)m (1012.7)m

State Plane Coordinates (VI): North Carolina (single zone)

X = 2,255,824.92 ft Y = 105,249.93 ft

Military Grid Zone (VI)

zone "B"
PHOTOGRAPHS (III)

<table>
<thead>
<tr>
<th>Number</th>
<th>Date</th>
<th>Time</th>
<th>Scale</th>
<th>Stage of Tide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nine Lens</td>
<td>4/1/42</td>
<td>12:33 p.m.</td>
<td>1:20,000</td>
<td>There are no tidal waters within the limits of this map manuscript.</td>
</tr>
<tr>
<td>8119 to 8122 Inc.</td>
<td>4/1/42</td>
<td>12:33 p.m.</td>
<td>1:20,000</td>
<td></td>
</tr>
<tr>
<td>8130 to 8132 Inc.</td>
<td>4/1/42</td>
<td>12:52 p.m.</td>
<td>1:20,000</td>
<td></td>
</tr>
<tr>
<td>8145 to 8147 Inc.</td>
<td>4/6/42</td>
<td>Clock stopped</td>
<td>1:20,000</td>
<td></td>
</tr>
</tbody>
</table>

Tide from (III): No tide computation necessary

Mean Range: Spring Range:

Camera: (Kind or source) U.S. Coast & Geodetic Survey nine lens camera (focal length 3\(\frac{3}{4}\))

Field Inspection/By: Allen Murphy

Field Edit by: Louis Levin

date: Spring, 1943

date: Aug 1943

Date of Mean High-Water Line Location (III):

Projection-and-Grids ruled by (III) C. H. R.

" " " checked by: C. H. R.

date: April 6, 1943

date: April 6, 1943

Control Plotted by: Charles C. Tropp

Control Checked by: John M. Reinoldi

date: April 8, 1943

date: April 14, 1943

Radial Plot by: Joseph Steinberg, J. Edward Deal, Jr.

date: May, 1943

Detailed by: John M. Reinoldi

date: June 8 to July 22, 1943

Reviewed in compilation office by: Henry P. Eichert

date: July 17-22, 1943

Elevations on Field Edit Sheet

checked by: Levin

date: Aug 13, 1943
STATISTICS (III)

Land Area (Sq. Statute Miles): 61

Shoreline (More than 200 meters to opposite shore): None

Shoreline (Less than 200 meters to opposite shore): None

Number of Recoverable Topographic Stations established:

   One Azimuth Reference Monument

Number of Temporary Hydrographic Stations located by radial plot: none

Leveling (to control contours) - miles: Unknown 4600 miles

Roman numerals indicated whether the item is to be entered by, (II) Field Party, (III) Compilation Party, or, (VI) the Washington Office.

When entering names of personnel on this record, give the surname and initials (not initials only).

Remarks:
FIELD INSPECTION REPORT
QUADRANGLE T-6191
PROJECT CS-2644
F. L. Gallen, Chief of Party

1. The vegetation in this quadrangle is chiefly evergreen except in the swampy areas where much brush and deciduous trees exist. There is much second growth pine as some sections have suffered from fires and extensive lumbering.

This quadrangle is crossed by U.S. Route 17 running across the center from W to E and making a sharp turn in a NE direction. This is a class 1 road, hard surfaced macadam. Several class 3 roads exist, and class 4 and 4 U are very numerous. The lumber companies have built many small woods roads that were an aid to topography, but their value for any length of time is questionable.

The one village in this quadrangle is Bolivia, N.C. (not incorporated), situated on U.S. 17 in the E section of aerial photograph 8120.

Many scattered farms exist in this quadrangle and agriculture seems to be spreading rapidly in this section. New areas are being cleared, and many new buildings are being erected. Although farming is making a bid for the lead, lumbering is still the predominate industry.

2. Field inspection in this quadrangle is believed to be complete.

3. See report for T-6192

4-5. See report for T-6188

6. The drainage of this quadrangle is mainly dendritic, many of the streams having rather narrow and deep-cut valleys. These streams account for elevations varying from 2 or 3 feet above sea level up to about 65 feet in the northern section. This type drainage is accompanied by many intermittent gullies. Sub-surface solution cavities have caused numerous depressions, and intermittent ponds. This can be seen readily on aerial photograph 8120. In the NW part of the center chamber, and to the E along the W. & B. R. R. The low elevations of some of the streams have caused them to meander and form rather extensive swamps. In general it should be said that the drainage of this quadrangle is typical of country which is undergoing shore-line emergence.
17. Political boundaries will be added by the Field Edit party.
19. Junctions with adjacent quadrangles are in agreement.

Submitted by:
Allen Murphy Jr. Topo. Engr.

Approved and Forwarded
F. L. Gallen
Chief Of Party
Six U. S. Coast & Geodetic Survey Triangulation Stations lie within the limits of this map manuscript. They are:

BOLIVIA, 1942
BOLIVIA FIRE TOWER, 1942
BOLIVIA JOHNSON LUMBER CO. STACK, 1942
GREEN, 1942
HARVELL, 1932
SUPPLY, 1932

In order to assure good identification of the horizontal control on the office photographs, the field inspection party established a Field Inspection Station near the triangulation station SUPPLY, 1932.

This Field Inspection Station is shown with a 2.5mm circle in orange ink on the glossy side of the map manuscript.

Three U. S. Coast & Geodetic Survey Stations lie just outside the limits of this map manuscript. They are:

MILL, 1932
WINNABOW, 1942
PINEY, 1942

Field Inspection Stations were established by the field party near triangulation stations WINNABOW, 1942 and PINEY, 1942.

All of the above horizontal control was used in the establishment of secondary control and detail points.

RADIAL PLOT:

Special reports for the radial plots are filed in the margin section. They proved to be inadequate.

The radial plot for this map manuscript is described in Section 4 of the descriptive report of the radial plots for Projects CS-275 and CS-284, which has been submitted to the Washington Office.

DETAILING:

Nine lens unmouted photographs were used for the compilation of this map manuscript.

The field inspection on this map manuscript was satisfactory. All drainage and the limits of swamp and low ground areas as field inspected, was verified on the office photographs by stereoscopic examination, and only slight changes were made.
28 DETAILING: (cont'd)

Additional drainage revealed by stereoscopic examination of the office photographs has been shown by a dot and dash symbol.

Where the field inspection party did not furnish this compilation office with the limits of swamp and marsh areas, these areas have been shown with the usual symbol but have not been outlined with a dashed, black acid ink line.

29 SUPPLEMENTAL DATA:

No previous surveys covering the area of this map manuscript were available to the compilation office. A blue-line print of the North Carolina, State Highway and Public Works Commission map of Brunswick County, was furnished the compilation office by the field party.

Paragraphs 30 to 35 Inclusive do not apply to this map manuscript.

36 LANDING FIELDS AND AERONAUTICAL AIDS:

There are no landing fields in this area nor are there any new aeronautical aids.

37 DISCREPANCY OVERLAY:

A discrepancy overlay has been prepared to accompany this map manuscript. On it are noted questions concerning interpretation of detail and such notes as are deemed likely to be of assistance during the field edit. Also shown, are the names or numbers of all bench marks, for the use of the Baltimore Compilation Office for identification purposes when scaling the bench marks to establish their geographic positions. A list of general notes is shown to aid in the interpretation of symbols and detail.

The traverse test points Nos. T-1 to T-4 inclusive, of the Horizontal Accuracy Test Traverse No. 4, are shown with double circles in black ink and numbered.

38 GEOGRAPHIC NAMES:

The field inspection party furnished a copy of a map of the North Carolina, State Highway and Public Works Commission, of Brunswick County. On this map is shown undisputed, disputed, and recommended geographic names for portions of Projects CS-275 and 284. A list of undisputed, disputed and recommended geographic names pertaining to this map manuscript is attached to this descriptive report.
The horizontal accuracy test fell within the requirements. The one traverse point which was off considerably, proved an investigation to be completed wrong. Because of difficulties encountered in the running of main radial plots for Projects GS-275 and 284, the test points for horizontal accuracy test traverse No. 4 were resurveyed on the map manuscript on which they fell. This was done prior to the compilation of the map manuscripts.

The positions of these test traverse points were scaled from the map manuscript and sent to the Washington Office for comparison with the computed geographic positions furnished by the field inspection party.

The results of the horizontal test traverse No. 4 furnished the compilation office by the Washington Office, indicate that the traverse points T-1, T-2, T-3 and T-4 which fall on this map manuscript are within the limits of accuracy for planimetric detail as specified in the instructions for war mapping. Traverse test point T-2 is 145.9 meters in error in latitude with the computed geographic position.

The results of the horizontal test traverse No. 4 will be attached to the descriptive report for the map manuscript for Survey No. T-8198. The traverse test points No. T-1 to T-4 inclusive fall within the limits of the map manuscript for Survey No. T-8191.

40 AZIMUTH REFERENCE MONUMENTS:

One Azimuth Reference monument lies within the limits of this map manuscript. It is:

GREEN, AZIMUTH, 1943

The position and description of this Azimuth reference monument, is submitted with this descriptive report on Form No. 524.

41 RECOMMENDATIONS FOR FUTURE SURVEYS:

The planimetric detail as presented on this map manuscript is believed to be complete, but is subject to field edit for corrections, additions, and deletions.

42 JUNCTIONS:

The following satisfactory junctions have been completed with this map manuscript:

On the North, with Map Manuscript for Survey No. T-8185
On the South, with Map Manuscript for Survey No. T-8198
On the West, with Map Manuscript for Survey No. T-8192
On the East, with Map Manuscript for Survey No. T-8190
43 REMARKS:

The description as prepared by the field inspection party adequately describes the area covered by this map manuscript.

44 COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES:

There are no Topographic Quadrangles available to this office for comparison. (These are now published)

A general comparison was made with a copy of the North Carolina State Highway and Public Works Commission map of Brunswick County, scaled \(1^\text{h} = 1\) mile. In general, the agreement was fair.

45 COMPARISON WITH NAUTICAL CHARTS:

There are no nautical charts covering the area of this map manuscript.
Respectfully submitted,
July 20, 1943

John M. Reinoldi
Sr. Photogrammetric Aid

Map Manuscript, Discrepancy Overlay and Descriptive Report Reviewed by:

Henry P. Reinhart
Jr. Photogrammetric Engineer

Compilation of Map Manuscript Supervised by:

Joseph Steinberg
Asst. Photogrammetric Eng.

and

J. Edward Deal, Jr.
Asst. Photogrammetric Eng.

Approved & Forwarded:
July 23, 1943

Fred. L. Peacock
Commander, C & G Survey
Officer-in-Charge
Baltimore Photogrammetric Office
LIST OF GEOGRAPHIC NAMES

Undisputed

Antioch
Antioch Bridge
Beaver Dam Bay
Bell Swamp Road
Boggy Branch
Boggy Branch Bridge
Bolivia
Bolivia Branch
Bolivia Bridge
Bolivia Road
Cherry Tree Swamp
Clark's Branch
Clements Curve
Ford Branch
Half Hell
Half Hell Branch
Half Hell Bridge
Half Hell Road
Holden Creek
Lemon Road
Lewis Road
Middle Swamp Bridges
Midway Branch
New Hope
New Hope Road
Nucitt Branch
Pinch Gut Bridge
Piney Grove
Piney Grove Bridge
Ramshead Branch
Ramshead Bridge
Rattlesnake Branch
Red Run
Sarsh's Hole
Suburb
Suburb Road
Sullivan Island
<table>
<thead>
<tr>
<th>Recommended</th>
<th>Disputed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bell Swamp</td>
<td>Bell Swamp Creek</td>
</tr>
<tr>
<td>✔ Lockwoods Folly River</td>
<td>Lockwood Folly River</td>
</tr>
<tr>
<td>✔ Middle Swamp</td>
<td>Middle Swamp Creek</td>
</tr>
<tr>
<td>✔ Pinch Gut Creek</td>
<td>Piney Grove Swamp</td>
</tr>
<tr>
<td>✔ River Swamp</td>
<td>River Swamp Creek</td>
</tr>
<tr>
<td>✔ Scotts Branch</td>
<td>Beaverdam Creek</td>
</tr>
</tbody>
</table>

*Map showing Geographic Names does not indicate Recommended name.*
FIELD EDIT REPORT
T-6191
PROJECT CS-284

18. In field editing the area just west of Bolivia, it was found that a few creeks were misnamed on the map manuscript. The correct names were ascertained after consulting some of the local farmers. The following farmers, who have lived in this area for the past forty years, are given as references: Homer Holden, and L. J. McKeethen of Bolivia, North Carolina.

46. The field edit was accomplished by visual inspection, making all additions and corrections on the map manuscript, and transferring all detail to a smooth copy while inking.

The following color scheme was used in inking the field edit sheet.

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>COLORS</th>
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<tbody>
<tr>
<td>Additions, corrections, wye level elevations and crosses</td>
<td>RED</td>
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<tr>
<td>Deletions</td>
<td>GREEN</td>
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<tr>
<td>Contours</td>
<td>BROWN</td>
</tr>
<tr>
<td>Civil Boundaries</td>
<td>VIOLET</td>
</tr>
</tbody>
</table>

47. The position and amount of detail on this map manuscript is believed to be complete and adequate.

48. A horizontal accuracy test was run in this quadrangle and in quad. No. 6198. Test proved accuracy of plot is within allowable limits.

The vertical accuracy test is the subject of a special report for project CS-284. The vertical accuracy test proved to be well within the required limits.

Submitted by
Louis Levin

Louis Levin
Photogrammetric Aid

Approved and Forwarded

P. L. Gallen
Chief of Party
<table>
<thead>
<tr>
<th>Remarks</th>
<th>Decisions</th>
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<tbody>
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<td>1</td>
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<tr>
<td>2  Road Maps</td>
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<td>3  339782  U.S.G.B.</td>
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<td>6  Apparently abandoned: listed in May, 1941, Railway Guide, but not in October, 1943.</td>
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<td>Name on Survey</td>
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<td>Brunswick County</td>
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<td>U.S. Highway No. 17</td>
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<td>Lockwoods Folly River</td>
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<td>Lockwoods Folly Twp</td>
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<td>Town Creek Twp</td>
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<td>Smithville Twp</td>
<td></td>
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<tr>
<td>Wilmington, Brunswick and Southern Railroad Company</td>
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<tr>
<td>N.C. Highway No. 120</td>
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<tr>
<td>Suburb</td>
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<tr>
<td>Midway Branch</td>
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<td>Sarahs Hole</td>
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<td>Antioch</td>
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<td>Antioch Bridge</td>
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<td>Rattlesnake Branch</td>
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<td>Half Hell</td>
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<td>Half Hell Branch</td>
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<td>Half Hell Bridge</td>
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<td>Half Hell Road</td>
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<td>Middle Swamp</td>
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<td>Middle Swamp Bridges</td>
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<td>Pinch Gut Creek</td>
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<td>Bolivia</td>
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<td>Bolivia Branch</td>
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<tr>
<td>Remarks</td>
<td>Decisions</td>
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<td></td>
<td><strong>340781</strong></td>
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<tr>
<td>3 Note that this and following names are shifted from the positions on the county map.</td>
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<tr>
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<td><strong>340782</strong></td>
</tr>
<tr>
<td>7 Names Report listed this name, but it is crossed out and McKeathens Curve substituted: authority for change not shown.</td>
<td><strong>340781</strong></td>
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<td></td>
<td><strong>341780</strong></td>
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<td><strong>341781</strong></td>
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<td>Name on Survey</td>
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</tr>
<tr>
<td>Bolivia Bridge</td>
<td>✓</td>
</tr>
<tr>
<td>Lewis Road</td>
<td>✓</td>
</tr>
<tr>
<td>Ramhead Branch</td>
<td>✓</td>
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<tr>
<td>Ramhead Bridge</td>
<td>✓</td>
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<tr>
<td>Holden Creek</td>
<td>✓</td>
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<tr>
<td>Pinch Gut Bridge</td>
<td>✓</td>
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<tr>
<td>Clements Curve</td>
<td>✓</td>
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<tr>
<td>Bell Swamp</td>
<td>✓</td>
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<tr>
<td>Bell Swamp Road</td>
<td>✓</td>
</tr>
<tr>
<td>New Hope</td>
<td>✓</td>
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<tr>
<td>New Hope Road</td>
<td>✓</td>
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<tr>
<td>Sullivan Island</td>
<td>✓</td>
</tr>
<tr>
<td>Cherry Tree Swamp</td>
<td>✓</td>
</tr>
<tr>
<td>Green Swamp</td>
<td>✓</td>
</tr>
<tr>
<td>Beaverdam Bay</td>
<td>✓</td>
</tr>
<tr>
<td>Red Run</td>
<td>✓</td>
</tr>
<tr>
<td>Bolivia Road</td>
<td>✓</td>
</tr>
<tr>
<td>Bolivia Forest Fire Lookout Tower</td>
<td>✓</td>
</tr>
<tr>
<td>Boggy Branch</td>
<td>✓</td>
</tr>
<tr>
<td>Boggy Branch Bridge</td>
<td>✓</td>
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<tr>
<td>Clark Branch</td>
<td>✓</td>
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<tr>
<td>Bond Branch</td>
<td>✓</td>
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<tr>
<td>Nucitt Branch</td>
<td>✓</td>
</tr>
<tr>
<td>Scotts Branch</td>
<td>✓</td>
</tr>
<tr>
<td>Lennon Road</td>
<td>✓</td>
</tr>
<tr>
<td>Beaverdam Swamp</td>
<td>✓</td>
</tr>
</tbody>
</table>

*Names underlined in red-approved by L. Reck on 11/6/43*
Between January, 1942 and July, 1944, this Bureau completed 323 quadrangles. These maps have been published, or are in the process of being published on scales of 1:31,680 or 1:25,000. This series of quadrangles includes a land area of approximately 15,000 square miles. Incident to this work, a considerable volume of survey records and data has accumulated which will be filed for future reference. This material is filed as follows:

**Registered and Filed in the Vault**

Cloth-mounted copy of the published quadrangle.

- Published quadrangle at 1:20,000 scale

Black and white cloth-mounted copy of the *map-manuscript*. This copy is filed to preserve original survey detail shown on the manuscript at 1:20,000 scale which may not have been shown on the published sheet. For *political-boundaries*, *woodland*, *marshy*-, and *swamp-limite*, refer to the published quadrangle for the finally adopted positions.

**Descriptive Report.**

- Division

Filed in the Photogrammetric Section—Surveys Branch—

Field inspection photographs.

Contoured photographs (on which planetable contouring work was performed.)

Field edit sheet.

Descriptions of recoverable topographic stations (Form 524), filed in Reviewing Unit.

Supplementary traverse and level records.

Field notes, computations, lists of positions, and tabulations of results of horizontal and vertical accuracy tests.

Reproduction proof.

Correction sheet (copy of quadrangle showing in red changes to be made when next printed.)

Check lists of work performed on each sheet in the Washington Office during review, drafting, edit, and reproduction.

Original celluloid manuscript.
Copies of specifications and all instructions to field parties and field offices.

**Filed in Reproduction Branch**

Glass negatives of the color separation drawings.

**Filed in the Library**

*Special report on field work by Commander K. T. Adams, 1944.*

*Special report on office work by B. G. Jones, 1944.*

*Season's report on field work by Commander F. L. Galen, 1944.*

*Season's report on field work by Commander R. L. Schoppe, 1944.*

Delivered to the Army Map Service in accordance with the contract

Film negatives and film positives of the color separation drawings.

All color separation drawings.

Original—celluloid—manuscript.

A correction sheet consisting of a copy of the first edition of the quadrangle with notes in red indicating changes desirable at the next printing.
General Procedure in the Production of Topographic
Quadrangles for the War Department

This quadrangle, together with similar adjoining maps
produced under Project C.S.284, was prepared by the
Coast and Geodetic Survey for the War Department under
"General Specifications for War Department Mapping
Program" issued about December 1941, in which is in-
corporated the "Standard of Accuracy for a National
Map Production Program" issued by the Bureau of the
Budget under date of June 10, 1941.

The general procedure in the production of this and
the adjoining quadrangles was:

FIELD SURVEYS

Aerial photography with the Coast and Geodetic
Survey nine-lens camera, with airplane and flight
crew furnished by the U. S. Coast Guard. The photo-
graphs were taken to the scale of 1:20,000.

Ground inspection of the photographs for identifi-
cation of control points, and classification and
clarification of planimetric details on the photo-
graphs.

Contouring by planetable directly on the photographs.
Supplementary vertical control was established by
means of an extensive subordinate level net, furnish-
ing unmarked elevations at road intersections, drive-
ways, and numerous other points identifiable on the
photographs.

COMPILATION OF MANUSCRIPT

Compilation on the map manuscripts by radial plot
methods (celluloid hand templets) of all planimetry
and contours. These manuscripts were drawn on the
scale of 1:20,000 on celluloid sheets on which
polyconic projections had been ruled with the
Projection Ruling Machine in the Washington Office.
Compilation was accomplished in the Baltimore-Tampa-
Photogrammetric Office.

FIELD EDIT

Comparison of a copy of the manuscript with the
ground. This included inspection for completeness
and accuracy as well as the location by planetable
methods of additional details, checking of nautical
and aeronautical aids to navigation, etc.
Accuracy Tests - Application of systematic horizontal and vertical accuracy tests to check the maps for conformity with the specifications. These tests consisted of comparison of the map position and elevation of selected random points with the true position and elevation as independently determined by standard survey methods.

PROCESSING IN THE WASHINGTON OFFICE

Review - Examination of the manuscript for accuracy and completeness of compilation and compliance with specifications, correcting where necessary; addition of military and state grids and other special features; and verification of the general adequacy of the manuscript as a basis for the production of a finished map.

Drafting and Reproduction - Preparation of smooth color separation drawings on 1:20,000 scale on metal-mounted "blueline" copies of the manuscript. From these drawings, negatives and printing plates were prepared for reproduction of the finished map on the scale of 1:31,680 or 1:25,000.
DIVISION OF CHARTS
SURVEYS BRANCH

REVIEW OF AIR PHOTOGRAPHIC SURVEY T- 8191

BOLIVIA QUADRANGLE

This quadrangle manuscript has been examined for completeness, accuracy, and conformity with the specifications. It is adequate for smooth drafting, reproduction and publication. Revisions found to be necessary in this office are discussed on the next page.

Horizontal and Vertical Accuracy

The horizontal accuracy test fell within the requirements. The one traverse point which was off considerably proved on investigation to be computed wrong. The vertical accuracy test proved to be well within the required limits. A report of these tests is filed in the Previous Surveys Division of Photogrammetry files.

This manuscript has been compared with the following previous topographic surveys of this Bureau and other agencies. This map is satisfactory to supersede the previous surveys over the common area.

There are no previous topographic surveys in this area.

Comparison with Nautical Charts Nos.

The manuscript has not been applied to the charts at the date of this review. The following comments are pertinent to the compilation and correction of nautical charts:

There are no nautical charts which cover the area of this map manuscript.
The following revisions of the map manuscript were found to be necessary and were accomplished as a part of this review:

Only changes of a minor nature were necessary during the review of this map manuscript.

Reviewed Oct. 8, 1943  By Robert B. Celien
under direction of D. H. Benson  per 10 W.

Inspected by S. A. Jones  12/6/45

Examined and approved:

K. T. Adams  Chief, Surveys-Branch
Division of Photogrammetry

Robert Wilcox  Chief, Div. of Charts

Chief, Topography Section

Chief, Div. of Coastal Surveys