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ORIGINAL

U. S. COAST & GEODETIC SURVEY  
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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

State: N. C.

DESCRIPTIVE REPORT

Topographic

~~Hydrographic~~

Sheet No. E 6004

LOCALITY

Bear Inlet to New River Inlet

1933.

CHIEF OF PARTY

Herman Odessey

U. S. GOVERNMENT PRINTING OFFICE: 1928

6004

DESCRIPTIVE REPORT  
to accompany

TOPOGRAPHIC SHEETS \* A, B, C, D, E.  
Back Sound to New River Inlet, N.C.

PROJECT HT-127, 1933.

DATE OF INSTRUCTIONS December 29, 1932.

CHIEF OF PARTY Herman Odessey, H. & G. Engr.  
Comm'd'g. Ship GILBERT.

TOPOGRAPHER S. B. Grenell, Jr. H. & G. Engr.

CONTROL The control for the topographic survey consisted of second and third order triangulation executed in 1908, 1914, and 1927, supplemented and revised by a second order revision survey completed in 1933 and carried in advance of the topography.

INSTRUMENTS, SHEETS, etc. The standard alidade, telemeter rods and plane table equipment were used with the exception of a new type aluminum-mounted sheet with a special board and clamps. These sheets seemed to be exceptionally adapted to this type of work in that there was absolutely no projection distortion. The new type board and clamps proved to be convenient in the field.

PURPOSE OF SURVEY Before the topography was begun, the entire area covered by this survey was photographed with the five-lens, aerial camera. The center prints arrived in the field while work was being done on the first sheet and from then on the topographer carried these prints in the field as an aid in selecting control points. Since it was understood that all detail would be transferred from the prints to the sheets at a later date, no traverse was run by the topographer to fill in extensive detail, but, after a careful inspection of the prints, an effort was made to locate on the sheet - for each adjoining print - at least two detailed features which could be identified on the print. At least two points on each print will serve as a basis for scale reduction and orientation and thus make it possible to transfer all detail required from the print directly to the sheet.

INSPECTION OF PHOTOGRAPHS As noted in the paragraph above, adjoining prints were taken in the field by the topographer each day and carefully checked with the area covered. Prominent objects could be easily identified and detailed notes were made directly upon the photographs to aid the compiler in determining the following features: high and low water line, vegetation, mud and sand flats, marsh, fast land, cultivation, fences, types of roads and trails, bridges, culverts, streets, rail road tracks, tanks, etc.

In addition to the daily field inspection, the topographer frequently took the prints on inspection by automobile and thus, by driving along the inland roads, much detailed notation could be made for areas not visible from the plane table set-ups or from the water.

For certain features, located for control purposes, it was necessary to prepare a sketch book for notes on measured distances to prominent objects. This was particularly true for church steeples and tanks located by triangulation and referenced to buildings, center lines of streets, etc. which show clearly on the prints. This sketch book will be forwarded directly with the photographs.

#### NOTATIONS ON SHEETS;

##### INKED DETAILS

When prominent details for control could be identified at or near triangulation stations, set-ups were made at these stations, but for intermediate points it was necessary to work three-point fixes. The triangulation control was admirably suited for this type of plane table control or location and it was always possible to check a three point fix with additional resections; thus assuring a high degree of accuracy in location. From these set-ups the required details were carefully rodded in and notes made on the prints to aid in identification.

All details inked on the sheets were carefully rodded in exactly as shown and no field sketching was done.

Many triangulation stations, used for field control, have been omitted from the inked sheets because they can not be identified in the prints, have no connection with control data shown, and would obliterate detail to be added later. The triangle has been omitted and only the center point shown in red for many stations in order to avoid obscuring control details.

All lighted beacons, located by triangulation, have been plotted on the sheets and many of these have been marked on the prints. By stereopticon investigation many more of the beacons may be identified on the prints.

Beside each inked detail on the sheets appears an encircled number in pencil. This is the number of the print on which were made the field notes relative to that particular detail. In addition, penciled notes have been made to aid in identifying details which could not be easily shown by a symbol: i.e. 'lone tree', 'white sand mound', 'bushes', 'small pond', etc.

To aid in orienting prints the center lines of roads, railroads, and bridges have been shown in pencil. Also on long tangents the edges of the dredged cut have been shown by a dotted pencil line as an aid to the compiler. Occasional penciled cuts to objects, which will show on the wing prints, have been left to aid in orienting these prints.

A blueprint of the progress sketch, which shows the sheet layout and all triangulation control, is attached to this report.

For the information of the reviewer, paragraph 8 of the Instructions dated December 29, 1932 is quoted herewith: " As it is planned to photograph this region in the near future with 5-lens camera, your topographic work shall be confined, in general, to supplementing the triangulation as necessary (1) to furnish adequate control for reducing the photographs and (2) to provide all U. S. Engineer stations and all aids to navigation are located."

The form used by the reviewer in checking topographic sheets in the Washington office was received aboard the GILBERT after the topography had been completed and the party had left the field. When the sheets were inked the form was carefully checked over and the following explanation is given for the omissions noted.

Magnetic Meridians

Due to an oversight no magnetic meridians were drawn on the sheets in the field. The area covered by these sheets is very flat and sandy and there is no indication of rock or mineral deposits to suggest the possibility of local attraction.

Vertical Control

Since these sheets were intended primarily for photo control, no attempt was made to secure elevation data.

Geographic Names

Few geographic names have been inked on the sheets to avoid interfering with detail to be added by the compilers. Enquiry, made while the field work was in progress, showed that the names are correct as charted.

SPECIFIC NOTES, SHEET - E

LIMITS

Bear Inlet to New River Inlet.

This projection has two projections dividing the area equally and thus making it possible to show a greater extent of canal and coast line on one sheet.

PROCEDURE

Work was extended from a junction with sheet D on the east to a junction with the work of A. P. Ratti, 1933, Longitude 77 - 18 , on the west.

Penciled notations on both the sheet and prints should make it easy for the compiler to identify all control points.

In several places set-ups were made on the edge of the canal bank, and, where this occurred on long tangents, a pencil line indicates the edge of the cut as an aid in orienting the prints. The canal cut shows very distinctly on the prints in this area.

Where print numbers are shown at triangulation stations the compiler should be careful to inspect the correct print because the station was frequently pricked directly on the photograph.

Approved:

*Herman Odessey*  
Herman Odessey,  
Chief of Party.

Respectfully submitted,

*S. B. Grenell*  
S. B. Grenell,  
Topographer.

This is to certify that topographic sheet 'E' covering the photo control survey of the inside passage and the outer coast line from Bear Inlet to New River Inlet, N. C. has been inspected and is approved.

*Herman Odessey*  
Herman Odessey, H. & G. E.,  
Coast & Geodetic Survey,  
Commanding Ship GILBERT.

## Plane Table Positions

Sheet E.

Letter	Approx. Latl	Approx. Long.	Description of object
THERE ARE NO PLANE TABLE POSITIONS FOR THIS SHEET			





DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO. 6004

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. E

REGISTER NO. **6004**

State North Carolina

General locality New River <sup>Laurel</sup>

Locality Bear Inlet to New River Inlet.

Scale 1:20,000 Date of survey March, 1933

Vessel GILBERT

Chief of party Herman Odessey

Surveyed by S. B. Grenell

Inked by S. B. Grenell

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

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

Instructions dated December 29, 1932

Remarks: Photo control sheet.