U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. A & B Office No.

LOCALITY
State Virginia
General locality Hampton Roads
Locality North side of Naval Operating Base
and Hilloughby Spit

1944

CHIEF OF PARTY
John H. Brittain

LIBRARY & ARCHIVES

DATE May 9, 1944
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. A-1944

REGISTER NO.

State Virginia

General Locality Hampton Roads

Locality Naval Operating Base

Scale 1:5000 Date of survey February-March, 1944.

Vessel Launch HILGARD

Chief of party John H. Brittain

Surveyed by R.H.Tryon, Jr.

Inked by R.H.Tryon, Jr.

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated February 8, 1944

Remarks: This survey graphic control only.

No review needed

aro 206433
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. B - 1944

REGISTER NO.

State Virginia

General Locality Hampton Roads

Locality Willoughby Spit

Scale 1:5000 Date of survey February - March, 1944

Vessel Launch HILGARD

Chief of party John H. Brittain

Surveyed by R.H. Tryon, Jr.

Inked by R.H. Tryon, Jr.

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated February 8, 1944

Remarks: ""
Note: T-6950 contains signals only, no review is necessary.

DESCRIPTIVE REPORT
TO ACCOMPANY
TOPOGRAPHIC SURVEYS A & B, 1944
Launch HILGARD
J.H.Brittain, Com'dg.

---

INSTRUCTIONS: The work was executed under Director's Supplemental Instructions for project GS 305, dated February 8, 1944.

CONTROL: Previously executed triangulation was adequate to control the work on these surveys. A geographic position was determined from a three-point theodolight fix at topographic signal Eve, 1943. The fix was taken from an eccentric point and this eccentric point was used to tie in one end of the traverse along Willoughby Beach.

METHODS: Standard methods of surveying as outlined in the Topographic Manual were used. On sheet A, the location of the hydrographic signals only was desired so the high water line was not determined.

On sheet B, the location of the high water line and the various jetty's was determined. The location of the offshore ends of all the jetty's could not be determined by the topographic party so that in some cases, sextant fixes were taken for these positions. See positions Nos. 106e, 107e, 108e, 111e, 113e, 114e, and 135g of the skiff hydrographic party.

TRAVESEES: A traverse was run from triangulation station SUB, 1943 to LAGOON, 1943. The closure of 1.5 meters was adjusted on the sheet.

A traverse was run from triangulation station LAGOON, 1943 to triangulation station CHAMBERS, 1943. The closure was 0.5 meter and was adjusted on the sheet.

On sheet B, nearly all signals were located from a closed traverse which extended from triangulation station MILL, 1943 to Eve eccentric. A spur traverse was run from a set-up 150 meters east of signal Vit eastward to locate signals Yel, Zed, and Add.

The traverse was run three times before a satisfactory closure could be obtained. The final discrepancy of 2.5 meters was adjusted on the sheet.

COMPARISON WITH PREVIOUS SURVEYS: The surveys were compared with Chart 400 and Topographic Survey 6913a. A general recession of from 10 to 15 meters was noted in the shore line along Willoughby Beach. The extreme end of Willoughby Spit has changed since the survey in 1943. At the south end of the hook, the shore has built out 17 meters. This action may have been aided by the hull of a boat that went aground on the point and filled with sand.
GEOGRAPHIC NAMES: There are no new names to be charted in the area covered by these surveys.

No names except title 814 L.H.

Respectfully submitted,

Raymond H. Tryon, Jr.,
Lieutenant, C. & G. Survey

Approved and Forwarded:
March 17, 1944

John H. Brittain,

No revision needed for sheet A
signals have been compared with contemporaneous kenos survey.
R.H. Carleton
DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF TOPOGRAPHIC SURVEY

REGISTRY NO. T-6959 b
FIELD NO. B-1944

Virginia, Hampton Roads, Willoughby Spit
Surveyed Feb. - March 1944
Instructions dated Feb. 8, 1944
Scale 1:5000

Plane Table Survey
Aluminum Mounted

Chief of Party - J. H. Brittain
Surveyed by - R. H. Tryon, Jr.
Inked by - R. H. Tryon, Jr.
Reviewed by - R. H. Carstens, March 27, 1947
Inspected by - H. W. Murray

1. Adjoining Surveys

The present survey was carried to a satisfactory junction with T-6913a (1943) on the west. No contemporary plane-
table surveys on the east have been made by this Bureau. However, the entire area is covered by quadrangle T-8303
(1944), and an adequate junction is made with that survey on the east.

2. Comparison with Prior Surveys

A. T-502 (1853)  1:20,000
   T-2632 (1903)  1:20,000
   T-3647 (1916)  1:30,000

Willoughby Spit has extended about 350 meters westward since the earliest of these surveys was made and the
north shore has receded about 75 meters. The numerous jetties along the north shore were constructed com-
paratively recently and do not appear on the prior surveys.

The present survey supersedes these prior surveys for shoreline detail within the common area.
3. Comparison with Contemporary Surveys

**T-8303 (1944) 1:20,000**

Agreement of this air photographic survey with the present survey is good except for numerous jetties shown on the present survey which are not shown on T-8303.

The present survey is adequate to supersede this contemporary survey for charting the shoreline in the common area.

4. Comparison with Chart 400 (Latest print date 12/9/46)

The present survey has been wholly applied to the chart before review. No revisions are necessary.

The magnetic variation determined on the present survey is in good agreement with the charted value. The corrections of the declinatoire readings, if any, are not known.

5. Condition of Survey

The inking was neatly done.

The Descriptive Report covered all essential details.

6. Compliance with Project Instructions

The present survey adequately complies with the Project Instructions.

7. Additional Work Recommended

This is an excellent survey and no additional field work is recommended.

Examined and Approved:

I. E. Rittenburg  
Chief, Nautical Chart Branch

E. M. Durgin  
Chief, Division of Charts

K. G. Crosby  
Chief, Section of Hydrography

C. K. Green  
Chief, Division of Coastal Surveys