

3832

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC
Field No. 3 Office No. H6832

LOCALITY

State VIRGINIA
General locality Norfolk, Virginia
Locality Willoughby Bay

194 3

CHIEF OF PARTY

Wilbur R. Porter

LIBRARY & ARCHIVES

DATE AUG 1943

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H6832

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

H6832

REGISTER No.

Field No. 3

State Virginia

General locality Norfolk, Virginia

Locality Willoughby Bay

Scale 1/10,000 Date of survey June, 1943

Instructions dated March 29, 1943

Vessel Launch FARIS

Chief of party Wilbur R. Porter

Surveyed by Wilbur R. Porter

Soundings taken by fathometer, graphic recorder, hand lead, wire Fathometer 808

Protracted by L.L. Lawrence

Soundings penciled by L.L. Lawrence

Soundings in ~~fathoms~~ feet at MLW ~~-MLLW-~~

REMARKS: This sheet was processed at the Norfolk Processing Office.

DESCRIPTIVE REPORT

H6832

to accompany

Hydrographic Sheet No. 3 (Field)

Project CS-305

1943

AUTHORITY:

This survey was executed under Instructions dated March 29, 1943. ✓

SCOPE:

The area north of the Naval Operating Base known as Willoughby Bay. ✓

SURVEY METHODS:

Standard survey procedure was employed thruout this hydrographic survey. Control was established by second order triangulation and supplemented by a plane table survey. All sounding lines were accurately controlled by sextant fixes taken from a point close to the fish. All soundings were made with an 808 depth recorder. Shoal water and soft mud in a few instances gave a faint record on the fathogram. ✓

At least two bar checks were taken each day. The lead line comparisons are not considered as reliable as the bar due to the soft mud bottom. ✓

A portable tide gage was installed at the end of the dock at Willoughby Spit. ✓

The Bay is closed to all boat traffic at the present time and is used entirely by seaplanes. The hydrography was done as rapidly as possible in order not to interfere more than necessary with the plane operation. The presence of a launch in the Bay was a danger both to planes and the launch party. ✓

DANGERS:

There are no dangers to boats drawing less than six feet except for a shoal southeast of Willoughby Spit. The entire area has been dredged and the bottom is lumpy. Depths varying from six to seven-^{six}teen feet were encountered. 83 ✓

DISCREPANCIES AND CROSSINGS:

There were no discrepancies and crossings are good. ✓

COMPARISON:

The bay has been dredged since the last hydrographic survey. ✓

A satisfactory junction was made with hydrographic survey H-5000 (1929) ✓

STATISTICS:

Statute miles of sounding lines	88.7
Number of positions	603
Area in square statute miles	1.7
Continuous profile	

Respectfully Submitted;

Wilbur R. Porter

Wilbur R. Porter,
Commanding FARIS.

WRP/r

H 832

A D D E N D U M

SHEET F-3 (Field)

Project CS-305, M. V. FARIS

This sheet was processed at the Norfolk Processing Office.

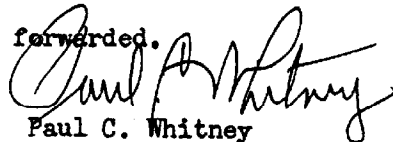
Respectfully submitted,



Isadore M. Zeskind
Associate Cartographic Eng'r.

Norfolk Processing Office,
July 24, 1943.

Approved and forwarded.



Paul C. Whitney
Supervisor, Southeastern District.

Surveys Section (Chart Division)

HYDROGRAPHIC SURVEY NO. **HS832**

Records accompanying survey:

Boat sheets¹.....; sounding vols. ².....; wire drag vols. ⁰.....;
 bomb vols. ⁰.....; graphic recorder rolls .4....;
 special reports, etc. ..none.....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	.....	605	
Number of positions checked	.....	52	
Number of positions revised	.....	2	
Number of soundings recorded	.....	4200	approx.
Number of soundings revised (refers to depth only)	.....	5	
Number of soundings erroneously spaced	.....	26	
Number of signals erroneously plotted or transferred	.....	—
Topographic details	Time	1 1/2 hrs	
Junctions	Time	.....
Verification of soundings from graphic record	Time	3 hrs.	
Verification by <i>P. J. Christman</i>	Total time	36 hrs	Date <i>Oct. 25, 1943</i>
Review by <i>Harold W. Murray</i>	Time	11 hrs.	Date <i>Oct. 27, 1943</i>

H5832

Remarks

Decisions

	Remarks	Decisions
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GEOGRAPHIC NAMES

Survey No. **H6832**

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
Virginia											1
Norfolk											2
Willoughby Bay											3
Hampton Roads											4
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MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
PHOTOSTAT OF

} No. H
} No. T

HC832

{ received August 4, 1943
{ registered August 5, 1943
{ verified
{ reviewed
{ approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
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83	Pg 2	JBB.	
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RETURN TO

82	R.W.Knox
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JBB

TIDE NOTE FOR HYDROGRAPHIC SHEET

August 10, 1943

~~Division of Hydrography and Topography:~~

✓ Division of Charts: Attention: H. R. EDMONSTON

Plane of reference approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 6832

Locality Willoughby Bay, Norfolk, Va.

Chief of Party: Wilbur R. Porter in 1943
Plane of reference is mean low water reading
1.5 ft. on tide staff at Willoughby Spit
10.1 ft. below B. M. 2 (1916)

Height of mean high water above plane of reference is 2.5 ft.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

DIVISION OF CHARTS

REVIEW SECTION - SURVEYS BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. 6832

Field No. 3

Virginia, Norfolk, Willoughby Bay
Surveyed June 1943, Scale 1:10,000
Instructions dated March 29, 1943 (Project CS-305)

Soundings:

808 Fathometer

Control:

Three-point fix on shore signals

Chief of Party - Wilbur R. Porter
Surveyed by - Wilbur R. Porter
Protracted by - L. L. Lawrence
Soundings plotted by - L. L. Lawrence
Verified and inked by - R. J. Christman
Reviewed by - Harold W. Murray
Inspected by - H. R. Edmonston, October 27, 1943

1. Shoreline and Signals

The shoreline and signals originate with plane table surveys T-6913a (1943) and T-6914 (1943). Signal IMP in Lat. $36^{\circ}57.3'$, Long. $76^{\circ}19.9'$ on T-6913a is the same as signal PIL on T-6914.

2. Sounding Line Crossings

Agreement of sounding line crossings is very good.

3. Depth Curves

The usual depth curves may be satisfactorily drawn. The bottom, however, is unusually lumpy.

4. Junctions with Surveys

The junction on the west with H-6833 (1943) will be considered when that sheet is verified.

A satisfactory junction for charting purposes is made with H-5000 (1929) at the mouth of the bay.

5. Comparison with Prior Surveys

H- 446 (1854)	Scale 1:40,000	H-3923 (1916-17)	Scale 1:30,000
H- 447 (1854)	" 1:20,000	H-3982 (1917)	" 1: 5,000
H-1188 (1873)	" 1:20,000	H-5000 (1929)	" 1:10,000
H-2861 (1907)	" 1:10,000		

The foregoing surveys cover portions or all of the present survey. The reviewer has individually compared each old survey with the present survey but in view of the extensive shoreline improvements and dredging of the main portion of the bay for a sea-plane base, it seems unwarranted to consider these changes in detail. It may be noted, however, that the general depths as first surveyed in 1854 ranged uniformly from 1 to 10 feet. The many lumps and pockets or holes revealed by the present survey are apparently due to uneven dredging operations. The present survey is adequate to supersede the above surveys.

6. Comparison with Chart 400 (New Print date 6-2-1943)a. Hydrography

The present survey is now being applied to the chart. The hydrography as at present charted originates principally with H-5000 (1929) mentioned in the preceding paragraph and Bp. 35727 (1941) which covers Willoughby Bay. Subsequent dredging has materially changed the character of the bottom and no adequate comparison can be made. There appears to be no complete assurance that all the shoals have been entirely removed and the compiler may find it advisable to retain an occasional shoal spot.

The obstruction charted in Lat. $36^{\circ}57.43'$ ^{25.8"}, Long. $76^{\circ}17.17'$ was used as a signal on the above blueprint. The present survey makes no mention of its existence. The cribbing line (broken line) extending into the bay from the south shore is apparently being removed because most of the lines on the blueprint are stopped when approaching the feature whereas the hydrographer of the present survey was able to run his lines without interruption.

b. Aids to Navigation

Aids to navigation satisfactorily mark the feature intended. The charted areo beacon

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418
218
218

labeled "approx. position" in Lat. 36°57', Long. 76°18' was located by 1943 triangulation. The present survey makes no mention of the three spar buoys marking the long channel in the western part of the present survey.

7. Compliance with Project Instructions

Satisfactory.

8. Condition of Survey

Satisfactory.

9. Additional Field Work Recommended

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

Mention is made that a note on Bp. 35727 (1941) states that the "proposed project is to dredge Willoughby Bay to 10 feet MLW to within 400 feet of the shore line."

10. Superseded Surveys

H- 446 (1854)	in part
H- 447 (1854)	" "
H-1188 (1873)	" "
H-2861 (1907)	" "
H-3923 (1916-17)	" "
H-3982 (1917)	" "
H-5000 (1929)	" "

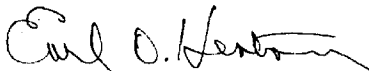
Examined and approved:



Chief, Surveys Branch



Chief, Division of Charts



Chief, Section of Hydrography



Chief, Division of Coastal Surveys

Applied, before verification & review, Oct. 11, 1943 X.P.
to Cht. 400

Inspected after verification & review on Cht 400 Mar 10 1944 H.F. Stegman

Applied to Cht 1222 March 11 1944 H.F. Stegman (previously applied
in part to litho proof
11/17/43)