

5987

WIRE DRAG SURVEY.

U. S. COAST & GEODETIC SURVEY
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Ed. June, 1928

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

State: Virginia

DESCRIPTIVE REPORT

~~Topographic~~
Hydrographic } Sheet No. 10 (W D)

LOCALITY

Smith Island Shoal

~~(Wire Drag Only)~~

Chesapeake Bay Entrance

19 35

CHIEF OF PARTY

Ray L. Schoppe

5987
WIRE DRAG SURVEY.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

HYDROGRAPHIC TITLE SHEET

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

Field No. 10 (WD)

REGISTER NO. 5987

State VIRGINIA

General locality ~~Atlantic Coast~~ Chesapeake Bay Entrance

Locality SMITH ISLAND SHOAL

Scale 1-10,000 Date of survey Sep't.-Oct., 19 35

Vessel LYDONIA

Chief of Party Ray L. Schoppe

Surveyed by Fred Natella

Protracted by Fred Natella

Soundings penciled by Fred Natella

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W.

Subdivision of wire dragged areas by Fred Natella

Inked by Fred Natella

Verified by J. A. Mc Cormick

Instructions dated June 13, 19 35

Remarks: Wire Drag Only

DESCRIPTIVE REPORT

WIRE DRAG SHEET FIELD NUMBER 10

U.S.C. & G.S. SHIP LYDONIA.

Ray L. Schoppe, Lieut-Com'dr. Commanding.

Project Number HT-142-143.

Instructions:-

Authority for this work was given by radio on June 12, 1935 to the Commanding Officer, Ship OCEANOGRAPHER upon his recommendation in the acknowledgment of Director's Supplemental Instructions of June 8, 1935 calling for a detailed development of Smith Island Shoal. Its purpose was to examine by wire drag and prove either the absence or presence of a reported 16 foot spot approximately one mile west of Smith Island Shoal buoy, and of the charted wreck about 2 1/2 miles S S W of the same buoy.

SCALE:-

This sheet was surveyed on a scale of 1-10,000.

CONTROL:-

Standard Survey buoys spaced approximately 1 1/2 miles apart, located by three point sextant fixes on shore triangulation stations, were planted about midway between the two areas to be dragged and were used for control.

SURVEY METHODS:-

The regular wire drag method of dual control was used. Three point sextant fixes and cuts to the drag buoys and towing launches were obtained from the survey buoys. The drag was tested with the conventional suspended iron rod coated with a mixture of white lead and tallow.

EQUIPMENT:-

Very little of the equipment was standard. The party had not anticipated this work until too late to procure more of the essential items of standard gear. Four foot diameter and two foot diameter spherical buoys were used for the end and intermediate buoys respectively. Standard lead line was used for uprights.

The ground wire, toggles and connections were standard. The spherical buoys were found to be too unwieldy to handle, in the open sea from a small boat. The drag depth was set on the LYDONIA, from where the whole drag was payed out, and it remained at that depth until it was reeled in. With regular drag buoys and uprights the drag depth could have been changed while the unit was operating. This was the only feature that may have slightly impaired the complete efficiency of operation, otherwise, considering the very limited extent of the work, the make shift equipment served satisfactorily.

Launches belonging to the OCEANOGRAPHER and LYDONIA were used to tow the drag while a dinghy with outboard motor acted as tender.

RESULTS:-

A rectangular area of one nautical mile long and one half mile wide was effectively dragged over the reported 16 ft. spot with the charted position of the shoal at the center of the area. The area was covered by a least effective depth of 19 feet with no groundings. A more extensive examination was planned for this area but time did not permit. An area a nautical mile square was dragged over the charted wreck, with the charted position of the wreck in the center of the area. This area was covered successfully with effective depths of from 30 to 35 feet with no groundings. A grounding occurred while running a dead line. It is believed the ground wire snagged bottom during a temporary slack in the drag. The spot was examined thoroughly with a lead line. A 37 foot sounding was the least depth found. The spot was dragged over and cleared to an effective depth of 32 1/2 to 33 feet. ^{19' on N + W}
_{-20' on S + E}

This party is of the opinion that both the wreck and shoal do not exist as reported, and recommends, therefore, that they be stricken from the charts.

TIDAL DATA:-

39


The tidal data for the reduction of soundings and for reducing to effective drag depth was obtained from the automatic tide gauge at Cobb Island, installed by the Ship LYDONIA and operated by a member of a near-by Coast Guard Station.

Respectfully submitted,

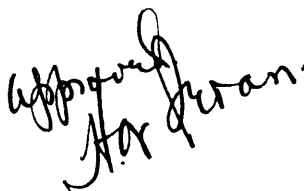


Fred Natella,
Lieut. (jg) C&GS

Examined and approved.



Ray L. Schoppe, Lieut-Comdr.
Chief of Party



STATISTICS

Date	Letter	Volume	Drag Length Feet	Positions	Statute Miles	Soundings
Sept. 26, 1935	A	1	1500	17	2.3	---
Oct. 3, 1935	B	1	1500	39	3.4	---
Oct. 11, 1935	C	1	1500	37	3.0	2
Oct. 14, 1935	D	1	1500	41	3.3	---
Total				134	12.0	2

TIDE NOTE FOR HYDROGRAPHIC SHEET

August 21, 1936.

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis

Plane of reference

~~Tide Recorder~~ approved in
and wire drag
3 volumes of sounding records for

HYDROGRAPHIC SHEET 5987

Locality Off Smith Island Shoal, Virginia Coast

Chief of Party: R. L. Shoppe in 1935


Plane of reference is mean low water

1.2 ft. on tide staff at Cobb Island

5.6 ft. below B.M. 1

Height of mean high water above plane of reference is 4.1 ft.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

Remarks

Decisions

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GEOGRAPHIC NAMES

Survey No. **5987**

Name on Survey	Sources										
	A	B	C	D	E	F	G	H	K		
<u>Chesapeake Bay Entrance</u> *			✓	✓			✓				1
<u>Smith I. Shoal</u> *				✓							2
											3
											4
											5
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Names underlined in red approved
 by W.P.D. on 5/14/36

Field Records Section (Charts).

HYDROGRAPHIC SHEET NO. **H5987 W.D.**

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

Number of positions on sheet134
Number of positions checked5
Number of positions revised0
Number of soundings recorded2
Number of soundings revised0
Number of signals erroneously plotted or transferred0

Date: August 27, 1938

Verification by J. A. McCornick

Review by Harold W. Murray

Ver. Corrections by "

Time: 4 hrs.

Time: 7 $\frac{1}{2}$ "

$\frac{1}{2}$ "

HYDROGRAPHIC SURVEY NO. H5987 Wire Drag

Smooth Sheet yes

Boat Sheet 1 and 1 A. & D.

Sounding Records 1 Vols. 2 Drag

Descriptive Report yes

Title Sheet yes

List of Signals Buoy Locations filed As Vol 4 & 5 H5989

Landmarks for Charts (Form 567) -

Statistics yes

Approved by Chief of Party no

Recoverable Station Cards (Form 524) -

Special Chart for Lighthouse Service -
(Circular Nov. 30, 1933)

Remarks _____

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
~~PHOTOSTAT OF~~

} No. H 5987
 } ~~No. T~~

{ received April 17, 1936
 { registered May 8, 1936
 { 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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RETURN TO

82	
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G. K. Green *May 12 - '36*

Verfuer's Report on H-5987 (where drag)

Records:

Day letters are shown in red in records
and in blue on smooth sheet.

Drafting:

Drafting is excellent.

Control:

Signals are from the records for
H-5989.

Remarks:

Sounding of 39 feet obtained by
field party. ~~It was not transferred.~~

August 27, 1936.

Submitted,

J. A. Mc Cormick

Section of Field Records.

REVIEW OF HYDROGRAPHIC SURVEY NO. 5987 W.D. (1935) FIELD NO. 10

Smith Island Shoal, Chesapeake Bay Entrance, Va.
Surveyed in 1935 - Scale 1-10,000
Instructions dated June 8 and 12, 1935 (OCEANOGRAPHER)

Wire Drag

Dual Control - 3 Point Fixes on Buoys

Chief of Party - Ray L. Schoppe
Surveyed by - Fred Natella
Protracted by - Fred Natella
Subdivision of Wire Dragged Areas by - Fred Natella
Inked by - Fred Natella
Verified by - J. A. McCormick.

1. Purpose of Survey.

The purpose of this survey was to prove or disprove the existence of a reported sunken wreck (charted) in lat. 37° 03.1', long. 75° 45.9' and a reported shoal with least depth 16.6 feet (16 charted with notation "reported") in lat. 37° 05.5', long. 75° 46.3'. The wreck originates with H.O. N. to M. No. 52 (1917), is reported as showing about 3 feet above the water, and is located by a single bearing and distance from a known object. The shoal originates with Chart Letter 388 (1935) which states that the Steamer "SATARTIA" drawing 16.6 feet touched bottom at this position. The shoal is located by 2 bearings and distances to known objects.

2. Results of Survey.

- a. The area within a radius of 715 m. of the reported position of the wreck was dragged to an effective depth ranging from 30 to 35 feet at M.L.W., the immediate vicinity of the wreck being dragged to an effective depth of 33 feet. No indication of the charted wreck was obtained. The charted depths in this vicinity are 37 to 43 feet. It is assumed that the wreck has either disintegrated or that the original reported position was in error.
- b. The vicinity of the charted 16 was dragged to effective depths of 19 to 20½ feet at M.L.W. for a distance of 370 to 590 m. from the reported position and no indication of the shoal obtained. In view of the general depths of 28 to 39 feet existing here, it would have been desirable to have covered the area with a greater effective depth. However, the present drag work together with the hydrographic survey made in this vicinity (see H-5989 (1935)) which shows a fairly uniform bottom is considered as sufficient evidence that the 16, as was charted from the report, does not exist.

In connection with the reported shoal, attention is called to the fact that the Smith Island Shoal buoy was located by the present hydrographer (see H-5989, (1935)) approximately 616 m. ENE of its charted position. One of the bearings taken by the Steamer "SATARTIA" in determining its position was taken to this buoy. If the position of the reported shoal was plotted using the position of the buoy shown on H-5989 (1935), the result would throw the shoal approximately 380 m. NW of the limits of the present drag work. However, it is possible that the position of the reported shoal was spotted on a chart by the SATARTIA and bearings and distances scaled from the nearest charted features in which case the actual position of the buoy at the time would not be material.

It is also noted that H-5989 (1935) shows a small shoal spot with several least depths of 21 feet approximately 1200 m. E x N of the reported position. It is barely possible that the vessel may have grounded at this spot.


3. Removal of Wreck and Shoal from Charts.


The foregoing discussion is made here as a matter of record only, the features in question having been removed from the charts on Feb. 1, 1936, on authority of Chart Letter 876 (dated October 16, 1935) from the Chief of Party which was received prior to the receipt of the survey.

4. Reviewed by - Harold W. Murray, September 10, 1936


Inspected by - A. L. Shalowitz.

Examined and approved:


C. K. Green,
Chief, Section of Field Records.


Chief, Division of Charts.


Chief, Section of Field Work.


Chief, Division of H. & T.