6976

WIRE DRAG

Diag'd. on Diag. Ch. No. 1222-3 & 1227

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey WIRE DRAG (WRECK INVESTIGATIONS)

Field No. WA-HI-4245 *Office No.* H-6976 W.D.

LOCALITY

State Virginia

General locality Approaches to Chesapeake Bay

Locality East of Cape Henry

194 5-'47

CHIEF OF PARTY
G.L.Anderson, I.E.Rittenburg,
L.C.Johnson and R.L.Pfau

LIBRARY & ARCHIVES

DATE July 23, 1946 & Sept. 8, 1948

8-1870-1 (1)

6976 WIRE DRAG

Form 537
(Ed. Nov. 1941)

REG. NO.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

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.

REGISTER No. H-6976

Field No. WaHi 4245

State Virginia

General locality Approaches to Chesapeake Bay

Locality East of Cape Henry

Scale 1:40,000 Date of survey May, 1945 Oct. & Nov.

Instructions dated September 12, 1944

Vessel Launches HILGARD & WAINWRIGHT

Chief of party George L. Anderson & I. E. Rittenburg

Surveyed by G.L.A. & I.E.R.

Soundings taken by fathometer, ~~graphic recorder~~, hand lead, ~~wire~~

Protracted by M.B.S.

Soundings penciled by M.B.S.

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

REMARKS: Dual control wire drag sheet.

U. S. GOVERNMENT PRINTING OFFICE 428975

Descriptive Report

to Accompany

Sheet Wa Hi - 4245

Launches WAINWRIGHT and HILGARD

G.L.Anderson and I.E.Rittenburg, Chiefs of Party

Instructions:

22/MEK, WA 1, HI 1 1995 dated Sept. 12, 1944
22/MEK, WA 1, HI 1 1995 dated Nov. 10, 1944
Supervisor, Southeastern District, Nov. 20, 1944
22/MEK 1995 WA 4, Dec. 22, 1944

Area:

This wire drag survey covers items 1, 2, 14, and 15 of the instructions of September 12, 1944.

Methods:

Standard dual control wire drag survey methods were used. The drag strips were controlled by three-point fixes on shore objects. The soundings obtained on item 15 were obtained w ith the 808 fathometer. A bar check was made at this depth soon after the sounding was obtained. The fathogram is forwarded with the tender record. (Subsequent demolition and drag work done on this item) Disregard

Control:

Triangulation stations Cape Henry Light House 1887 - 1932, Cavalier Hotel Cupola 1939, Virginia Beach Water Tank (Bunk), 1909, 1920, 1922, 1931, [redacted] Range [redacted] and hydrographic station TANK (located by sextants cuts and a fix at the station itself. Measurements were also made to the center line of intersection roads in the immediate vicinity so that location may be established from Air Photographs, furnished adequate control. The information for the position of hydrographic station Tank is on page 7 of the Smooth Tender Record.

Comparison with chart 1222: in ϕ 36°51.3', λ 75°50.9'

Item No. 1: This obstruction was cleared with an effective depth of 43½ (44) feet. The reported obstruction NM #7, 1944 is no longer a danger to navigation and can be expunged from the chart.

Item No. 2: This spot was cleared with an effective depth of 44 ~~42~~ feet. The reported wreck, NM ~~#12~~ #4, 1944, is therefore no longer a danger to navigation. ϕ 36°52.12' λ 75°50.60'

Item No. 14: The position of this wreck was dragged and cleared with an effective depth of 41½ feet. The reported wreck No. 279 (C.L. 43, 1944)

Lat. 36° 48.80' Long. 75 53.30' is no doubt the erroneous position of the Kingston Ceylonite which was found in its charted position at item 15.

Item No. 15: This reported wreck of the Kingston Ceylonite NM #21, 1944 was cleared at 37.0 feet and the drag hung up at 38.0 feet (predicted tides). The strip involving the 38 foot "G" was not plotted on the boat sheet because the right angle man on the guide launch used the most southerly of three [redacted] towers instead of the most northwesterly [redacted]. The location of this tower was searched for in the triangulation data furnished this vessel, but was not found. This tower may have been located by air photo compilation or by triangulation, the data of which was not furnished us. If the location of this range tower can be found, this strip can be plotted. There is no doubt that this 38' hang was on the same object, as a fix was obtained where the ground wire snagged using the correct signals. Plotting of this fix was in the same location as the fix obtained on B day. As the line itself serves no purpose other than to provide a basis for the G at 38 foot, it is recommended that it be not plotted. This line was plotted on smooth sheet and later removed (note on pg. 18, Vol. I., G. Launch)

Disregard; subsequent demolition & clearance. See Processing Addendum

Tides:

Predicted tides for Hampton Roads were used with the necessary correction for tidal fifferences and constants. Final values for tide reducers are to be furnished by the Washington office. (See par. 13 of instructions.

Statistics:

Date, 1945	Day	Stat. miles of strip	No. pos.	No. Sound.
May 7	A	2.9	29	0
9	B	4.2	25	1
14	C	2.8	18	1
23	D	8.6	64	0
25	E	8.4	63	0
31	F	4.3	35	0
	Totals	31.2	234	2

Area covered: 18.9 Stat. square miles.

Note: An investigation (not covered in this Desc. Report) was made during this season's work of the charted sunken wreck in lat. 36°56.75', long. 75°57.55'. The results of this investigation are given on page 7b. of the 1947 work. (Item #5, of Project Instructions)

George L. Anderson
Officer in Charge
Launch HILGARD

I. E. Rittenburg
Officer in Charge
Launch WAINWRIGHT

LIST OF SIGNALS

SHEET H-6976

TRIANGULATION STATIONS

BUNK	VIRGINIA BEACH WATER TANK, 1909-31
CUP	CAVALIER HOTEL CUPOLA, 1939
HENRY	CAPE HENRY LIGHTHOUSE, 1887- 1932
MATE	[redacted]
MITE	[redacted]
TAR	[redacted]
RADIO	VIRGINIA BEACH, E. RADIO MAST, 1932
RANGE	[redacted]
SOUTH	[redacted]

HYDROGRAPHIC STATIONS

TANK	Smooth tender vol. 1, page 7

LIST OF

CONFIDENTIAL SIGNALS

H-6976 W.D. (1945-47)

HYDRO NAME	TRIANGULATION NAME
MATE	CASEMATE, (U.S.E.) 1939
NITE	GRANITE TOWER "C", (U.S.E.) 1939
PAR	PARCEL "C", TOWER A, (U.S.E.) 1939
RANGE	RIFLE RANGE, TOWER A, (U.S.E.) 1925-39
SOUTH	PARCEL "C", TOWER B, (U.S.E.) 1939

Entered in Descr. Report

ADDENDUM

To Accompany

WIRE DRAG SURVEY H-6976-1945, (Field No. WA-HI 4245)

SHIPS WAINWRIGHT AND HILGARD

Lat. 36°49.6' Long. 75°52.15' Item no. 15, wreck of the Kingston Ceylonite.

The wire-drag development done on this item by Ships Wainwright and Hilgard was not plotted on smooth sheet as further demolition has been done. Final clearances were obtained by Ships Parker, Bowen and Stirni during the 1948 field season. This work will be plotted on the Shoran sheet covering the area. see ~~G.L. 504, 1948~~ EE. No 3, 1949

A template is being submitted with the sheet showing drag strips done by Wainwright and Hilgard on this item. *

Respectfully submitted,

Hugh L. Proffitt

Hugh L. Proffitt
Engr. Draftsman

Norfolk, Va.
Aug. 25, 1948

Approved and Forwarded:

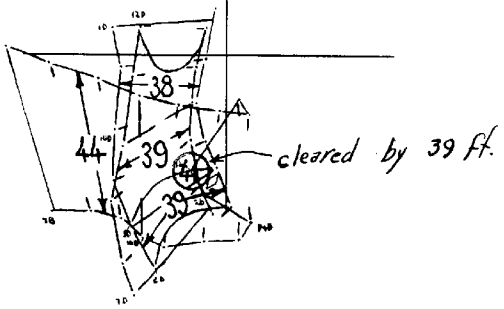
Earl O. Heaton

Earl O. Heaton
Supervisor, S.E. District

* Two overlay tracings showing work by WAINWRIGHT & HILGARD in 1945 and one overlay showing SOSBEE work in 1946 made a part of Desc. Report. The work on these overlays was included on the A. & D. sheet.

52'

36°50'



54'

52'

75°

50'

48'

H-6976 (W.D.)

OVERLAY

Wreck "KINGSTON CEYLONITE"

scale 1:40,000

WAINWRIGHT - HILGARD

30 Oct.-7 Nov., 1945

H-6976 (W.D.)

OVERLAY

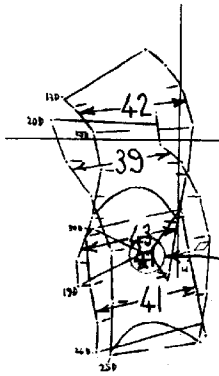
Wreck "KINGSTON CEYLONITE"

scale 1:40,000

WAINWRIGHT- HILGARD

7 Nov. 1945

52'



cleared by 39 ft.

36°50'

54'

52'

48'

75° 50'

Form 537
(Ed. Nov. 1941)

REG. NO. H-6976

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

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.

REGISTER No. H-6976

Field No. WaHi 4245

State Virginia

General locality Approaches to Chesapeake Bay

Locality Wreck of the KINGSTON CEYLONITE

Scale 1:40,000 Date of survey 17 - 18 June, 1946

Instructions dated

Vessel SOSBEE and ACCELERATE (ARS-30)

Chief of party L. C. Johnson

Surveyed by L. C. Johnson, E. B. Latham and John Bowie Jr.

Soundings taken by fathometer, graphic recorder, hand lead, wire 0

Protracted by Norfolk Processing Office

Soundings penciled by

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

REMARKS: This survey was processed in the Hydrographic Section of the Southeastern District, Norfolk, Va.

U. S. GOVERNMENT PRINTING OFFICE 428975

AMENDMENT TO DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET H-6976

WIRE DRAG INVESTIGATION

A. INSTRUCTIONS

22/MEK WA 1, HI, 1 1995, 12 Sept. 1944 and 22/MEK WA 1, HI, 1 1995, 10 Nov. 1944. Supervisor Southeastern District 20 Nov. 1944 and 22/MEK WA 4, 22 Dec. 1944. Additional instructions, Supervisor, Southeastern District, 13 June 1946.

B. SURVEY LIMITS AND DATES

Vicinity of wreck of KINGSTON CEYLONITE, Latitude 36° 49.6', Longitude 75° 52.15'. Field work, 17 and 18 June, 1946.

C. VESSELS AND EQUIPMENT

U.S.C.&G.S.S. SOSBEE, guide vessel; Salvage Tug ACCELERATE (ARS-30), end vessel; 24 ft launch of the ACCELERATE, tender.

The ACCELERATE, a steel salvage tug on charter to the Navy, operated by Merritt-Chapman and Scott, was furnished for this investigation. The ACCELERATE is a steam tug of approximately 450 tons. The vessel is quite heavy for use in wire drag, but is steam powered, and capable of accurate speed control and maneuverability.

Standard Coast and Geodetic Survey wire drag was employed. The drag consisted of 6 300 ft. sections.

C1. ORGANIZATION OF PARTY

Guide Launch	L. C. Johnson	Left angle and plot
	J. Bowie	Right angle and buoy angle
	E. Richards	Recorder
End Launch	E. B. Latham	Left angle and plot, buoy angle
	Don A. Jones	Right angle and recorder
Drag Master	Charles A. Schoene	

D. TIDES AND CURRENT STATIONS

Field reductions are taken from predicted tides at Hampton Roads, with a time difference of minus 1 hr 5 minutes, and a ratio of ranges of 1.2 applied. Final reducers are to be supplied from the Washington Office from observed tides at Hampton Roads Standard Gage. No currents were observed.

E. SMOOTH SHEET

The project constitutes additional work on Sheet H-6978 and is being plotted thereon by the Norfolk Processing Office. See also report of George L. Anderson, May 1945. (preceeding Desc. Report)

F. CONTROL STATIONS

Identical with those on H-6978 and report of George L. Anderson, May 1945.

G. SHORE LINE AND TOPOGRAPHY

Not applicable.

H. SOUNDINGS

No soundings recorded.

I. CONTROL

Standard dual control methods were employed. Difficulty in obtaining fixes due to Naval maneuvers in the vicinity on 18 June were encountered, but were successfully surmounted.

J. ADEQUACY OF THE SURVEY

It is believed that this investigation is entirely adequate. See also paragraphs L, N and U.

K. CROSS LINES

Not applicable

L. AGREEMENT WITH PREVIOUS SURVEYS

The position of the grounding agrees excellently with position found in May 1945. Agreement is satisfactory ~~inasmuch as~~ 8/17/45 demolition work was accomplished between the dates of these investigations.

M. COMPARISON WITH CHART

Satisfactory

N. DANGERS AND SHOALS

It is believed that subject wreck no longer constitutes a danger. However a buoy now marks the wreck.

O. COAST PILOT INFORMATION

See Form 567 attached hereto.

P. AIDS TO NAVIGATION

Buoy has been established and is charted.

Q. LANDMARKS FOR CHARTS

See Form 567 attached hereto.

R. GEOGRAPHIC NAMES

Not applicable.

S. SITTED AREAS

Not applicable.

T. BY-PRODUCT INFORMATION

Wreck master states that sounding with diver holding on highest point of wreck indicates a depth of 46 feet over the wreck. The fact that the position of ground obtained is in agreement with the 38 ft. ground in 1945 indicates that the diver was in the vicinity of the previous high point of the wreck.

U. RESULTS

The vicinity was traversed with the drag from west to east and from east to west.

The area was cleared from ~~east~~ east to ~~west~~ west to ~~east~~ with an effective depth of *45 ft. (~~using predicted tides~~) on 17 June, 1946. * eff. depth reduced to 43 ft. (See note below)

On 18 June the area was traversed from west to east, four significant traverses being made as follows:

a. Effective depth 44 ft (~~predicted tides~~) grounded on two traverses. (68-130 and 170-180)
b. Effective depth 43 ft (~~predicted tides~~) cleared on two traverses, (one of which was poorly controlled). (18-58 and 240-308)

V. CONCLUSIONS

It is entirely possible that the wreckage has been cleared to a depth of 45 ft, although certification of clearance can not be made due to limitations of the wire drag together with uncertainties resulting from working in the open ocean. Adverse sea conditions existed on 17 June. Probably caused excessive lift.

In accordance with Specifications for the wire drag the maximum depth that can be certified over the wreck is 43 feet ~~(subject to final reduction for tide)~~. It is believed that this determination is as accurate as is possible to obtain by use of the wire drag, and specified procedure. See L.507 (4998) F.E. No 3-1949

It is noted that with uprights set to uniform depth, the reduction for lift must be made in accordance with the maximun lift in any one section. It is further noted that tests made on the drag indicated variations of lift between sections of 2.5 feet.

Tide reducers, even if of perfect accuracy will, on occasion, reduce the effective depth by 0.7 ft.

The effect of any swell will influence the drag tests and will cause discrepancy between sections. (2 ft. swells on 17 June 1946) see marginal notes on preceeding page)

In consideration of the above, it is entirely possible that grounding of the drag may have occurred in a depth of 45 ft to 46 ft.

W. RECOMMENDATION

In consideration of the fact that conditions of weather, wind and sea on 18 June, were believed to be the optimum for wire drag in open areas, and in accordance with Paragraph V above it is urgently recommended that similar investigations be based on a tolerance of never less than two feet, preferably three feet between the depth specified for demolition and the depth to be cleared by the wire drag.

It is further recommended that all concerned be advised that subject tolerance is required in connection with such investigations.

L. C. Johnson.
L. C. Johnson
Lt. Comdr. USC&GS

Ector B. Latham
Ector B. Latham
Lt. Comdr. USC&GS

John Bowie, Jr.
John Bowie Jr.
Lt. Comdr. USC&GS

Form 567
Rev. March 1935

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

TO BE CHARTED } STRIKE OUT ONE
~~TO BE DELETED~~ }

Norfolk, Virginia 24 June, 1946

I recommend that the following objects which have (*have not*) been inspected from seaward to determine their value as landmarks, be charted on (~~*deleted from*~~) the charts indicated.

The positions given have been checked after listing.

Chief of Party.

GENERAL LOCALITY / NAME AND DESCRIPTION	POSITION					METHOD OF LOCATION	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
	LATITUDE		LONGITUDE		DATUM						
	° ′	D. M. METERS	° ′	D. P. METERS							
ELEV. TANK	36 46	1640	76 57	840	NA '27	Sextant	May 1945			x	1227 ✓
plotted on chart	1227		11-8-48		PPR						

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

U. S. GOVERNMENT PRINTING OFFICE 6067S

A D D E N D U M

to accompany

ADD. WORK HYDROGRAPHIC SHEET NO. H-6976 (NaHi-4245)

The foregoing descriptive report is written to cover only that part of the wire drag investigation of the wreck KINGSTON CEYLONITE accomplished by the Ship SOSBEE and the Navy Salvage Tug ACCELERATE (ARS-30).

This descriptive report is being forwarded to the Washington Office at this time in order that you may be informed as to the results of this investigation. It is requested that this descriptive report be included in the final Descriptive Report of Survey H-6976 which will be forwarded to the Washington Office when all wrecks within the limits of this survey have been investigated.

The corrections shown in red in the main body of the report were made in the Hydrographic Section of the Southeastern District, Norfolk, Virginia.

An A & D Sheet is being forwarded with this report. (~~attached~~) superseded by attached overlay because of changes in H.O. Chart 1227

The location of the wreck as plotted by this office is at latitude 36° 49' plus 1192 m and longitude 75° 52' plus 152 m.

Respectfully submitted,

Isadore M. Zeskind
Cartographic Engineer

Norfolk, Va.
July 18, 1946

Approved & Forwarded

George L. Anderson
Supervisor SE District

ADDENDUM
To Accompany

Wire Drag Sheet H-6976 Add. (Field No. Wa-Hi 4245)
Ships SOSBEE and ACCELERATE

This Descriptive Report covers work done by Ship SOSBEE in Item #15, Wreck of the Kingston Ceylonite.

Drag work done by Ship SOSBEE was not plotted on smooth sheet as additional work was done during 1948 field season by Ships PARKER, BOWEN and STIRNI. This work will be shown on the shoran sheet covering the same area. A template is being submitted with this sheet, showing strips dragged by Ship SOSBEE. * FEB 3, 1949

Respectfully submitted,

Hugh L. Proffitt

Hugh L. Proffitt
Engr. Draftsman

Norfolk, Va.
August 25, 1948

Approved & Forwarded

Earl O. Heaton

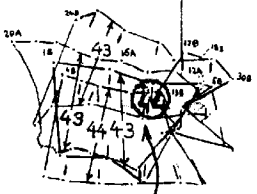
Earl O. Heaton
Supervisor, S.E. District

* Template made part of Desc. Report. Work of Sosbee on A & D sheet included

Recd with duplicate of D.R. Sept 8, 1948

52'

36°50'



cleared by 43 ft.

54'

52'

48'

75° 50'

H-6976 (W.D.)

OVERLAY

Wreck "KINGSTON CEYLONITE"

scale 1:40,000

SOSBEE

17-18 JUNE 1946

Form 537
(Ed. Nov. 1941)

REG. NO.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

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.

REGISTER No. H-6976 Add.

Field No. Wa-Hi-4245

State VIRGINIA

General locality APPROACHES TO CHESAPEAKE BAY

Locality VICINITY OF CAPE HENRY LIGHT

Scale 1:40,000 Date of survey 5 June to 27 Oct. 1947

Instructions dated 24 July 1946

Vessel PARKER, BOWEN AND STIRNI

Chief of party Ralph L. Pfau

Surveyed by M.A. Hecht, John C. Bull, R.H. Tryon, D.A. Jones, H.L. Proffitt

Soundings taken by fathometer, ~~graphic recorder, hand lead, wire~~

Protracted by M.B. Smith & H.L. Proffitt

Soundings penciled by M.B. Smith

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

REMARKS: This report covers that part of the sheet done by Ships Parker, Bowen and Stirni.

U. S. GOVERNMENT PRINTING OFFICE 428975

DESCRIPTIVE REPORT
TO ACCOMPANY
WIRE DRAG SURVEY FIELD SHEET NO. WaHi-4245

PARKER, BOWEN & STIRNI — Lt. Comdr. Ralph L. Pfau, Comdg.

AUTHORITY

This survey was executed in compliance with Instructions for Project CS-326 dated 24 July 1946 and in accordance with priority for items contained in letter from the Director dated 8 May 1947.

DATE OF SURVEY

Field work was begun on 5 June 1947 and ended 31 October 1947.

SCOPE

This survey includes the wire drag operations performed for the purpose of locating and clearing shoals and obstructions on three items at the outer entrance to Chesapeake Bay and in the vicinity of Cape Henry Lighthouse. These Items have been assigned numbers 3, 4, and 6.

CONTROL

Natural objects previously located by triangulation or hydrography were used for control.

SURVEY METHODS

Standard dual control methods were used, drag strips being controlled by three point shore fixes. Lifts were determined by tests made by the tenderusing a graduated rod coated with a mixture of white lead and oil.

The PARKER was used as the guide launch, the BOWEN as the end launch, and the STIRNI as the tender throughout this entire survey.

A great deal of difficulty was encountered with strong and unpredictable cross currents and it was necessary to reject many strips because of excessive lifts. Experiments were made to overcome the difficulty and it was found that the only thing that gave the desired results most of the time was to shorten the length of the drag section, consequently, a 300 ft section was used on most of the strips during the latter part of the operating season.

RECORDS

Tide reducers and lift were entered to 0.5 feet and the diagrams drawn in the record books show effective depths to the next lowest integral foot. Lift, tide reducers, effective depths and diagrams have been checked.

TIDES

No tide gage was maintained by this party. For the preliminary tidal reduction and for drag settings predicted tides corrected for tidal difference for Hampton Roads Virginia were used. Final values of reducers were furnished (upon request), by the Washington Office.

OBSTRUCTIONS, CLEARANCES, DISCREPANCIES, etc.

Special reports concerning these surveys have been submitted to the Washington Office at the time of completion of each item. Copies of these are attached and become a part of this report.

RECOMMENDATIONS

No additional wire drag work is recommended, but due to the character of the bottom and to the strong currents which prevail it is felt that it is possible to show ~~slightly~~ shoaling more clearance than ~~actually~~ exists. An intensive hydrographic survey on these shoals is recommended. Charting depths are recommended in the special reports attached.

Some reconnaissance hydrography was accomplished on shoal areas, Item No. 4, but this work was done only to determine drag settings. This hydrography is not being submitted as the NJ-9 fathometer used is not considered satisfactory for hydrographic surveying.

Respectfully submitted,

Maurice A. Hecht

Maurice A. Hecht
Lt. Comdr USC&GS

Approved and Forwarded:

Maurice A. Hecht
for Ralph L. Pfau
Lt. Comdr USC&GS
Chief of Party

8742

COPY

418 Post Office Building, Norfolk, Va.

28 August, 1947

To: The Director
U.S. Coast & Geodetic Survey
Washington 25, D.C.

Subject: Special Report on Wire Drag of Item No. 3
Latitude 36-54 Longitude 75-53

(H.O.N. to M. No. 7, 1944)

The wire dragging operations of Item No. 3, (reported obstruction at Lat 36-54.3 Long 75-53.8) has been completed. The obstruction reported has apparently been found located at Lat 36-54 440.0M Long 75-53 ~~790.0M~~ 760 m. in general 57 feet of water. The shoalest sounding obtained by the tender was 45.5 feet. The obstruction was hung at 42 and 43 feet and cleared at 40.0 ~~40.5~~ feet twice in opposite directions. All depths were reduced for predicted tides. (Corrected for actual tides)

It is recommended that this obstruction be charted at 40 feet clearance depth ~~(subject to final correction for actual tides).~~ dtr. 1227

Another small obstruction was found just outside the one mile radius of the above reported obstruction in 34 29 feet of water. This obstruction was hung at 30.5 30 feet and cleared at (30) feet. No sounding shoaler than bottom was obtained. Obstruction is located at Lat 36-54 ~~968.0M~~ 910.0 Long 75-52 ~~726.0M~~ 710.0. All depths reduced for predicted tides. (Corrected for actual tides

It is recommended that this obstruction be charted at ~~30~~ 29 feet ~~(subject to final correction necessary for actual tides).~~ (Chart as 29) dtr. 1227

Ralph L. Pfau
Chief of Party

cc: Supervisor S.E. District

COPY

418 Post Office Building, Norfolk, Va.

20 October, 1947

To: The Director
U.S. Coast & Geodetic Survey
Washington 25, D.C.

Subject: Special Report on Wire Drag of Item 4, Latitude 36-56 Longitude 75-54, Project CS 326

1. The wire dragging operations of Item No. 4 (reported shoals of 27, 30 and 26 feet) has been completed. Only one obstruction was found in the reported location but with 32 feet of water over it instead of the 27 feet reported. Three other obstructions in this area were hung and cleared, the shoalest being 30 feet and it is recommended that this depth be used as the least effective depth for charting in this area. The information on the obstruction's found is given on the* enclosure attached. No examination of these obstructions was made by a diver and none is contemplated.

*following page

2. It is felt that all obstructions in this area have been found but due to the character of the bottom and to strong currents that it is possible for the drag to clear to a greater depth than actually exists. It is recommended that these shoal areas be thoroughly investigated by hydrography.

Ralph L. Pfau
Chief of Party

1. Enclosure (A)
cc: Supervisor SE District

(see preceeding page)

Enclosure (A)

Obstruction Data Sheet

LOCATION	GENERAL DEPTH	MINIMUM HANG	MAXIMUM CLEARANCE	CHARACTER	REMARKS
Lat 36°- 56' - 1108 M Long 75°- 53' - 791 M	36'	~~32½'~~ 32	~~31½'~~ 30	Unknown - Apparently an obstruction.	Tender unable to obtain sounding on ground - Position of drag indicated this to be a small obstruction.
Lat 36°- 56' - ~~705~~ 720 M Long 75°-54' - ~~255~~ 480 M	35'	~~34'~~ 32	32' *	Unknown - Possibly a shoal spot	Drag V ed up and cleared before Tender could obtain position or sounding.
Lat 36°- 56' - ~~120~~ M Long 75°- 53' - ~~1455~~ 1430 M	35'	~~32'~~ 30	30'	Unknown - apparently an obstruction	Tender unable to obtain sounding on ground - Position of drag indicated this to be a small obstruction.
Lat 36°- ~~55'~~ 56 - ~~1840~~ 000 M Long 75°- 54' - ~~440~~ 464 M	35'	~~34'~~ 32	~~32'~~ 30	ditto	ditto applied to chart 1327 by me U.S.E.R.

5b.

All soundings and drag depths are reduced on predicted tides.

* eff. depth this strip reduced to 32 ft. to avoid conflict; suspect strong currents affecting lift.

418 Post Office Building, Norfolk, Va.

3 November, 1947

To: The Director
U.S. Coast & Geodetic Survey
Washington 25, D.C.

Subject: Special Report on Wire Drag of Item No. 6, Latitude 36°- 57'.5 Longitude 75°- 57'.3 Project CS-326

1. The wire drag operations of Item No. 6 (20 foot (originally a sonkan wreck) 20 sounding in Lat. 36-57.5, Long. 75-57.3) has been completed. A (21) foot effective depth drag cleared this 20 foot location without any indication of a ground. Several obstructions which were hung and cleared are shown on the enclosure attached. (See following page)

2. It is recommended that the maximum clearance (corrected for actual tides) be used for charting in this area.

Ralph L. Pfau
Chief of Party

Enclosure (A)

cc. Supervisor SE District

Enclosure (A)

STRUCTION DATA SHEET

LOCATION	GENERAL DEPTH	MINIMUM HANG	MAXIMUM CLEARANCE	CHARACTER	REMARKS
Lat 36°- 58' ~~1254~~ ✓ 41"					
Long 75°- 58' ~~240~~ ✓ 6" 160	26'	24' ✓	21 ~~22~~	AWOIS 10/15/84 msm Unknown	WK Schooner Charmer 1912
Lat 36°- 57' ~~1729~~ ✓ 56"		22	20		
Long 75°- 57' ~~736~~ ✓ 31" 773	23'	~~21~~+	~~21~~+	AWOIS 10/16/84 msm *	
Lat 36°- 57' ~~1675~~ ✓ 54"		20	20		
Long 75°- 57' ~~630~~ ✓ 27" 672 1601	23'	~~21~~+	~~19½~~	AWOIS 10/16/84 msm *	
Lat 36°- 57' ~~1629~~ ✓ 52"		21	20		
Long 75°- 58' ~~100~~ ✓ 8" 192 1609	22'	~~21½~~+	~~21~~+	AWOIS 10/15/84 msm *	Note →
Lat 36°- 57' ~~1575~~ ✓ 52"		20	20		
Long 75°- 57' ~~770~~ ✓ 36" 884 1280	23'	~~21~~+	~~20½~~+	AWOIS 10/16/84 msm *	
Lat 36°- 57' ~~1299~~ ✓ 42"		20	20		
Long 75°- 57' ~~1054~~ ✓ 45" 1124	22'	~~21~~+	~~20½~~+	AWOIS 10/16/84 msm *	
Lat. 36° 57' 929 m. 30"	22'	21'	20'	AWOIS 10/15/84 msm "	
Long. 75° 58' 172 m. 7"					

All soundings and drag depths are reduced on *predicted tides.

* corrected for actual tides

The tender made investigations on these grounds with the fathometer but was unable to pick up obstructions. The drag Ved sharply and hung securely on these obstructions indicating small objects rather than shoals. This area is close to a war-time mine field and it is suspected that obstructions are anchors of mines and listening devices that were not removed and have become embedded in bottom. A drag with an effective depth of 20' (by predicted tides) was taken across charted 20' spot with no indication of a hang.

Lat. 36° 56 - 1388 m.					
Long. 75° 57 845 m.	80'	56' (54' ~~Fathom~~ Sdg. Actual)	50'	wreckage	"A small piece of steel wreckage pulled to surface by drag" from note on pg. 4, Vol. 2, Tender Record (date: Oct. 29, 1945)
Item* 5 (investigated 10/29/45)					

SHIPS PARKER, BOWEN & STIRNI - STATISTICS FOR SHEET (FIELD NO. P.B.S. 4147)
APPROACHES TO CHESAPEAKE BAY
OFF CAPE HENRY
PROJECT NO. CS-326

1947

Date	Day	Stat Mi. Drag	No. Positions	No. Soundings H.L	FATH
6/5/47	A	2.35	23	0	0
6/6/47	B	2.50	28	2	0
6/11/47	C	4.80	46	0	0
6/12/47	D	3.30	24	0	0
6/13/47	E	1.00	14	0	0
7/16/47	F	1.10	8	0	0
7/17/47	G	1.50	13	0	0
7/18/47	H	2.10	23	0	0
7/24/47	J	2.50	18	0	0
8/19/47	K	1.60	14	0	0
8/20/47	L	4.00	31	0	0
8/26/47	M	4.70	37	0	2
8/27/47	N	2.60	21	0	2
9/4/47	P	1.40	8	0	0
9/5/47	Q	3.40	19	0	0
9/11/47	R	1.50	9	0	1
9/12/47	S	0.90	7	0	1
10/9/47	T	0.70	8	0	0
10/16/47	U	2.70	19	0	0
10/17/47	V	1.50	20	0	0
10/21/47	W	3.80	31	0	0
10/22/47	X	3.50	25	0	0
10/23/47	Y	2.40	17	0	0
10/27/47	Z	2.70	**19	*0	0
Totals		58.55	482	2	6

TOTAL SQUARE STATUTE MILES DRAGGED 21.3

LIST OF SIGNALS

SHEET H-6976

TRIANGULATION STATIONS

BUNK	VIRGINIA BEACH WATER TANK, 1909-31
CUP	CAVALIER HOTEL CUPOLA, 1939
HENRY	CAPE HENRY LIGHTHOUSE, 1887- 1932
MATE	[redacted]
NITE	[redacted]
PAR	[redacted]
RADIO	VIRGINIA BEACH, E. RADIO MAST, 1932
RANGE	[redacted]
SOUTH	[redacted]

HYDROGRAPHIC STATIONS

TANK	Smooth tender vol. 1, page 7

A D D E N D U M
To Accompany

WIRE DRAG SMOOTH SHEET H-6976 Add. (Field No. WaHi-4245)
Ships PARKER, BOWEN and STIRNI

SOUNDINGS

Tender soundings were not plotted on smooth sheet as they were obtained with a NJ-9 fathometer. These soundings, with the exception of 2 m (Tender), show only general depths. The minimum depth of which each obstruction was hung, is shown at groundings.

DISCREPANCIES

Lat. 36°-56.4' Long. 75°-54.3'

Lat. 36°-57.7' Long. 75°-57.75'

effective depths adjusted to eliminate discrepancies

Obstructions at these points were cleared at a greater depth than they were hung. This was no doubt caused by a variation in lift across the drag, due to strong and variable currents in this area.

SPLITS

Lat. 36°-56.3' - Long. 75°-53.4'

covered by FE No 3, 1949

At this point there is a small area of insufficient overlap. A tracing of this split has been furnished Ship PARKER and it will be dragged during the 1948 field season. This will be shown in a shoran sheet covering the area.

Respectfully submitted,

Hugh L. Proffitt

Hugh L. Proffitt
Engr. Draftsman

Norfolk, Va.
August 25, 1948

Approved & Forwarded

Earl O. Heaton

Earl O.Heaton
Supervisor, Southeastern Dist.

GEOGRAPHIC NAMES

Survey No. H6976

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H		
Virginia				(for title)					USGB K	1
Chesapeake Bay				"	"				"	2
Cape Henry										3
										4
										5
										6
				Names underlined in red are approved. 9/21/48 L. Heck						7
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M 234

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-6976.

Records accompanying survey:

Boat sheets 2...; sounding vols. 3..; wire drag vols. 4....;

bomb vols. .....; graphic recorder rolls .....;

special reports, etc. .....

.....

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

Number of positions on sheet		716
Number of positions checked		34
Number of positions revised		10
Number of soundings revised (refers to depth only)		—
Number of soundings erroneously spaced		—
Number of signals erroneously plotted or transferred		—
Topographic details	Time	—
Junctions	Time	—
Verification of soundings from graphic record	Time	—

Verification by. L.W. Evans (4) ....Total time 34 hrs. Date 12 Aug. 1949

Reviewed by....J.A. Dinsmore..... Time 32 hrs. Date 13 Dec. 1949

M-2232-1

RHC

Form 712
DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY
Rev. June 1937

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~ 28 September 1948

Division of Charts: R. H. Carstens

Plane of reference approved in
17 volumes of sounding records for

HYDROGRAPHIC SHEET 6976

Locality - East of Cape Henry, Coast of Virginia.

(in 1945, 1946, 1947)
Chief of Party: G. L. Anderson, I. E. Rittenburg, John Bowie, Ralph Pfau
Plane of reference is mean low water, reading
3.6 ft. on tide staff at Hampton Roads (N.O.B.)
13.4 ft. below B. M. 6 (1927)

Height of mean high water above plane of reference is 2.5 feet

NOTE: The time and range allowances used at the different working grounds are as follows:

Time difference		Ratio of range
Chesapeake Bay Entrance (Cape Henry)	-105	1.1
Virginia Beach	-105	1.2

Condition of records satisfactory except as noted below:

E. C. McKay
Section
Chief, ~~Division~~ of Tides ~~and Currents.~~

U. S. GOVERNMENT PRINTING OFFICE 154337

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-6976 W.D.

FIELD NO. WA-HI-4245

Virginia, Approaches to Chesapeake Bay, East of Cape Henry
Surveyed in 1945, 1946 and 1947 Scale 1:40,000
Project No. CS-313 & 326

Soundings:

Hand lead

Control:

Sextant fixes on shore signals

Chief of Party - G.L. Anderson, I.E. Rittenburg, L.C. Johnson and R.L.Pfau
Surveyed by - G.L. Anderson, I.E. Rittenburg, L.C. Johnson, E.B. Latham, J. Bowie, Jr., M.A. Hecht, J.C. Bull, R.H. Tryon, Jr., D.A. Jones and H. L. Proffitt
Protracted by - M. B. Smith and H. L. Proffitt
Soundings plotted by - M. B. Smith
Verified and inked by - L. V. Evans III
Reviewed by - T. A. Dinsmore, December 13, 1949
Inspected by - R. H. Carstens

1. Shoreline and Signals

The shoreline is from topographic quadrangles T-8299 and T-8301 (1942-44).

The origin of the signals is given in the Descriptive Report.

2. Adjoining Surveys

The present survey covers semi-detached areas and joins no other wire-drag surveys.

3. Comparison with Contemporary Surveys

H-6595 (1940) 1:40,000

Present effective drag depths are in harmony with the soundings on H-6575, which covers the area north of lat. 36° 49.7'.

No other contemporary surveys fall within the area of the present survey.

4. Comparison with Chart 1222 (Latest print date 6/20/49)
Chart 1227 (Latest print date 1/24/49)

a. Hydrography

Charted depths are in harmony with the effective depths of the present survey, except for minor differences.

The present survey was applied to the charts prior to verification and review. Several clearance depths have been revised during verification of the present survey.

Other discrepancies between the charted information and the present survey are noted as follows:

(1) The "obstruction reported" (Chart 1222) in lat. 36° 54.33', long. 75° 53.80', was cleared by an effective depth of 47 ft. on the present survey. Originating with H.O. Notice to Mariners No. 7 (1944), the reported obstruction is considered disproved in it's charted position and should be disregarded.

(2) The 26-ft. "reported E.D." sounding (Chart 1222) in lat. 36° 56.28', long. 75° 52.60', was cleared by an effective depth of 32 ft. on the present survey. Originating with Chart Letter 83 (1940), the reported sounding which falls in 36-ft. depths is considered disproved and should be disregarded.

(3) The charted clearance depth of 44 ft. over the wreck in lat. 36° 49.60', long. 75° 52.15', is from a wire-drag investigation (Chart Letter 507, 1948) subsequent to the present survey and therefore (supersedes) the *43-ft. clearance depth shown on the present survey.

* 43 ft. also on FB No 3, 1949

b. Aids to Navigation

The lighted buoy located on the present survey in lat. 36° 49.62', long. 75° 51.97', and marking the sunken wreck in that vicinity has been removed subsequent to the present survey (H.O. Notice to Mariners 42, 1948).

The lighted buoy charted in lat. 36° 57.28', long. 75° 58.40', is about 160 meters north of the position obtained on the present survey. Either position adequately serves the purpose intended.

Other survey positions of aids to navigation are in substantial agreement with the charted positions and adequately mark the features intended.

5. Condition of Survey

a. The field records and Descriptive Reports are complete and comprehensive.

b. The field plotting was neat and accurate.

c. The following reported obstructions (not charted) were disproved by the present survey (Item numbers correspond to those in the Project Instructions):

	Latitude	Longitude	Source
Item 1 (obstr.)	36° 51.30'	75° 50.90'	H.O.N.to M.7 (1944)
Item 2 (wreck)(*)	36° 52.12'	75° 50.60'	H.O.N.to M.4 (1944)
Item 6 (wreck)(**)	36° 57.60'	75° 57.30'	C.G.N.to M.18 (1942)
Item 14 (wreck)	36° 48.80'	75° 53.30'	Chart Letter 43 (1944)

(*) Before this wreck could be charted, H.O. Notice to Mariners No. 5, (1944) reported it as dispersed. The present investigation of 1945 confirmed this information.

(**) This wreck was dispersed prior to the present investigation of 1947 which cleared the 20-ft. sounding in the immediate vicinity by an effective depth of 20 ft. Several obstructions, however, were revealed in this general vicinity and are indicated on the smooth sheet together with their clearance depths.

Awois sheets 10/18/84 msm

d. Item 3: The disproval of this reported obstruction has been discussed in par. 4a (1). Other obstructions revealed in this vicinity appear on the smooth sheet.

e. Item 4: The three reported shoal soundings of 27, 30 and 26 ft. (30 and 26 charted) in the vicinity of lat. 36° 56.2', long. 75° 53.4' originate with Chart Letters 83 and 310 (1940). These reported shoal spots were cleared by effective depths of 31-32 ft. on the present survey and are considered to be disproved in their reported positions. Four small obstructions, however, were revealed in this general vicinity and are indicated on the smooth sheet together with the effective depth at which they were cleared. The reported 26 ft. sounding has been previously discussed in par. 4a (2).

f. Item 5: The wreck (charted) in lat. 36° 56.75', long. 75° 57.55', falling in general depths of 80 ft. originates with C.G. Notice to Mariners 42 (1939). This wreck was

cleared by an effective depth of 50 ft. on the present survey. A fathometer sounding of 54 ft. was obtained at the point of hang (56 ft.).

g. Item 15: The wreck (charted) in lat. 36° 49.60', long. 75° 52.15', falling in general depths of 50 ft. originates with H.O. Notice to Mariners 21 (1944). This sunken wreck was cleared by an effective depth of 43 ft. on the present survey. As previously mentioned in par. 4a (3), the charted clearance depth of 44 ft. is from information subsequent to the present survey (Chart Letter 507, 1948). 43 ft clearance on F.E. No 3, 1949 (Not verified at this date 4-14-50)

The Descriptive Report, together with copies of special reports by the hydrographer, attached, discuss in detail the investigation of the items covered in paragraphs c. through g. above.

h. A small area of insufficient overlap occurs in lat. 36° 56.3', long. 75° 53.4' on the present survey. (covered by F.E. No 3, 1949)

6. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

7. Additional Field Work

The Processing Office Addendum (Descriptive Report, page 10b.) indicates that the small area of insufficient overlap mentioned above will be covered by subsequent work in this area. (done)

Because of the difficulties encountered from strong currents and the resultant uncertainties of lift, while wire dragging this area, the hydrographer recommends (Desc. Report, page 2b and 4b) that the shoal areas be thoroughly investigated by intensive hydrographic development.

Examined and approved:

H. R. Edmonston
Chief, Nautical Chart Branch

Casper M. Durgin
Chief, Division of Charts

K. G. Crosby
Chief, Section of Hydrography

W. M. Scaife
Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. H6976 WD

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
9/14/48	1222	L.G. McGann	(Before) ~~After~~ Verification and Review
11-8-48	1227	P.R. Godson	Before ~~After~~ Verification and Review
2/3/49	78	L.G. McGann	(Before) ~~After~~ Verification and Review
4/25/49	1109	H.W. Burgoyne	(Before) ~~After~~ Verification and Review
12/29/49	1222	T. Prisgaard	~~Before~~ After Verification and Review
4-14-50	1227	P.R. Godson	~~Before~~ After Verification and Review
12/15/50	14940-25-2	F.E. Richardson	~~Before~~ After Verification and Review Completely
1-5-51	14940-25-3	F.E. Richardson	Completely
12/16/51	1109	H.W. Burgoyne	~~Before~~ After Verification and Review completely applied
7/8/52	3335	Lacy R. Dittman	~~Before~~ After Verification and Review
Aug 55	1000 1000 L		~~Before~~ After Verification and Review complete appl.
2/16/62	562	R.E. Elkins	appl after Ver & Rev. Added 8 obstns.
8/24/70	78	J.H. Hillan	Applied fully After V&R. Thru ch 1222

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.