

# FE78

## WIRE DRAG

Diagram No. 1001-2

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

### DESCRIPTIVE REPORT

(HYDROGRAPHIC)

Type of Survey ... Wire Drag  
Field No. ... PBS-WD-4348  
Office No. ... FE-78WD

#### LOCALITY

State ... Virginia  
General Locality .. Atlantic Ocean  
Locality ... Approaches to Chesapeake Bay

1948

CHIEF OF PARTY  
A.C. Thorson

#### LIBRARY & ARCHIVES

DATE ... December 21, 1949

☆ U.S. GOV. PRINTING OFFICE: 1976-669-441

NOTE: A new system for registering Field Examinations (FE's) was established in 1980. All FE's are now consecutively numbered as shown hereon. The date shown in the new format is the actual date of survey. This material was previously registered as:

FE No.4 1949

FE78  
WIRE DRAG

**FE No. 4**  
**1949**  
**WIRE DRAG**

FE-78

Diag'd. on Diag. Ch. No. 1001-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

**DESCRIPTIVE REPORT**

Type of Survey WIRE DRAG  
Field No. PBS-WD-4348 Office No. F. E. No. 4,  
(1949) W. D.

LOCALITY

State Virginia  
General locality Atlantic Ocean  
Locality Approaches to Chesapeake Bay

1948

CHIEF OF PARTY

A. C. Thorson

LIBRARY & ARCHIVES

DATE Dec. 21, 1949

B-1870-1 (1)

**FE No. 4**  
**1949**  
**WIRE DRAG**

DEC 21 1949

Form 537  
(Ed. June 1948)

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.

F.E. No. 4 (1949)W.D.

REGISTER No. ~~33668WD~~

Field No. PBS-4348WD

REG. NO. F.E. No. 4 (1949)W.D.

State ..... Virginia ✓

General locality ..... Atlantic Ocean ✓

Locality ..... Approaches to Chesapeake Bay ✓

Scale ..... 1:40,000 Date of survey ..... 12 July thru 11 Aug. 1948

Instructions dated ..... 5 March 1948

Vessel ..... Parker, Bowen & Stirni

Chief of party ..... A.C. Thorson

Surveyed by ..... A.C. Thorson

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

Fathograms scaled by .....

Fathograms checked by .....

Protracted by ..... S.M. Tarkenton

Soundings penciled by ..... None

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

REMARKS: .....

DESCRIPTIVE REPORT  
TO ACCOMPANY

WIRE DRAG SURVEY FIELD SHEET NO. PBS-WD-4348

PARKER, BOWEN & STIRNI

Lt. Comdr. A.C. Thersen, Comdg.

AUTHORITY

This survey was executed in compliance with instructions for Project CS-326, dated 5 March 1948.

DATE OF SURVEY

Field work on this sheet commenced on 12 July 1948 and was completed on 11 August 1948

SCOPE

This survey was made in order to locate and determine the least depths over Wreck No. 748 (John Mergan); Wreck No. 729 (Lillian Luckenbach); Wreck No. 794 (Spring Chicken), and Wreck No. 278 (stern of the Francis E. Powell).

The survey also included Item 27, a submerged obstruction located in Lat.  $37^{\circ} 04' 00''$  north and Long.  $75^{\circ} 10' 54''$  west, which was reported in Notice to Mariners No. 11 (1947).

*Letter 625 (1948)  
calls for "Obstr." to be removed  
from charts. Stan*

CONTROL

This survey was Sheran controlled thruout.

It was originally planned to locate the Sheran shore stations at Hog Island and Cape Henry Lighthouses. However, erosion had undermined the Hog Island Lighthouse and it was destroyed just prior to initiating this survey. The loss of Hog Island Lighthouse for a shore station necessitated the erection of a 126 foot Bilby Tower on a sand dune in the vicinity of False Cape, about 15 miles south of Virginia Beach. The survey necessary to locate this tower is included with the descriptive report for Sheet WD-4248.

*FB 3(49)*

SURVEY METHODS

Standard prescribed dual control methods were employed thruout this survey. Azimuths to the NEAR and FAR buoys were determined by the Guide and End Vessels respectively, by pelouses mounted on gyre-repeaters located on the flying bridges of the vessels.

Standard 100-foot lengths of ground wire were used for the towline and the distance from the pilot house to the end of the bridle was added in determining the total length of the towline. The distance from the pilot house to the towing end of the bridle was approximately 60-feet. The following entries were made for length of towline:

<u>Length of Ground Wire Used</u>	<u>Length of Towline Entered in Meters</u>
300'	120
400'	150
500'	180

Tests for lift were made by the Tender using a graduated lead filled pipe attached to graduated airplane cord. This line was attached to a standard small-buoy reel mounted on a float, a strayline attached to the float facilitated picking up the tester. The pipe was coated with a mixture of whitelead and oil just prior to each test in order to accurately determine point of contact with ground wire.

The Ship PARKER was used as the Guide Vessel, the Ship BOWEN as the End Vessel and the Ship STIRNI as the Tender.

#### RECORDS

Drag settings were based on predicted tides for Hampton Roads, Virginia. The available time and height corrections for the area being dragged were applied to the predicted tides. Actual tides used in the completion of smooth records were furnished this party by the Washington Office. All references to effective depth unless otherwise specified are those indicated in the record books.

Tide reducers and lifts have been entered to the nearest 0.5 feet and checked. Effective depth diagrams for each drag strip have been drawn and checked for the indicated effective depth.

#### TIDES

Tide gages were not maintained by this party. Hourly heights scaled from the record obtained at the standard gage in Hampton Roads, Virginia, with corrections for the applicable area, were furnished this party by the Washington Office and were used to process the records.

OBSTRUCTIONS, CLEARANCES, DISCREPANCIES, ETC.

Special reports relative to this survey were submitted to the Director during the progress of this survey and duplicates of these reports were forwarded to the Supervisor, S.E. District. Copies of these reports are attached hereto and become a part of this report.

*A.C. Thorsen*

A.C. Thorsen, Lt. Comdr.  
Comdg. PARKER, BOWEN & STIRNI

STATISTICS FOR SHEET NO. \_\_\_\_\_ (PBS-WD-4348)  
 Ships PARKER, BOWEN & STIRNI Project CS-326

APPROACHES TO CHESAPEAKE BAY, VIRGINIA

<u>Date</u> 1948	<u>Day</u> <u>Letter</u>	<u>Stat. Miles</u> <u>Drag</u>	<u>Number</u> <u>Positions</u>	<u>No.</u> <u>H.L.</u>	<u>Soundings</u> <u>Fath.</u>
12 July	A	2.0	22	"	"
13 July	B	5.7	52	"	"
19 July	C	3.9	38	"	"
20 July	D	4.8	56	"	"
21 July	E	4.3	50	"	"
26 July	F	2.2	27	"	3
27 July	G	5.1	58	"	"
2 August	H	2.2	21	"	"
4 August	J	2.8	31	"	"
9 August	K	7.4	82	"	"
11 August	L	4.6	57	"	"
Totals		45.0	494	"	3

Total square statute miles area dragged 20.1

OBSTRUCTION DATA SHEET

LOCATION	GENERAL DEPTH FEET	<del>MAXIMUM HANG</del> <i>Least E.D.</i>	POSITION NUMBER	MAXIMUM CLEARANCE FEET	POSITION NUMBER	CHARACTER OF OBSTRUCTION	REMARKS
36°-58' → <sup>1050</sup> 1080M 75°-24' → <sup>1242</sup> 1284M	96	53' ✓	19A	52' ✓	24-38 C	Wreck 729 Lillian Luckenbach	
37°-00' → 176M 75°-24' → 752M	98	52' ✓	28E	51' ✓	45-56D	Wreck 748 John Morgan	
36°-51' → <sup>563</sup> 490M 75°-11' → <sup>898</sup> 870M	92'	81' ✓	32L	78' ✓	1-15L	Wreck 794 Spring Chicken	Obstruction No.3 this area.
36°-49' → <sup>60</sup> 90M 75°-23' → 1287M	88	57' ✓	19J	55' ✓	20-30J	Wreck 278 Francis E. Powell (stern)	
37°-04' → 00" 75°-10' → 54"	110			83-85' ✓ 83-81' ✓	1-46K 47-82K	Unknown	Net found

COPY  
HEADQUARTERS FIFTH NAVAL DISTRICT  
Naval Operating Base  
Norfolk, 11, Virginia

ND5(10)H3-8

14 August 1945

From: ComFive  
To: Supervisor, Southeastern Dist., U.S. Coast & Geodetic Survey,  
Norfolk.

Subj: WIRE DRAG VICINITY OF SPRING CHICKEN WRECK BUOY-REQUEST FOR

Refs: (a) Com5 lettr ND5(10)H3-8, 21 Apr. 1945  
(b) Com5 lettr ND5(10)H3-8, 9 Jul. 1945

1. By ref (a), ComFive requested a wire drag of the wreck of the Spring Chicken (No. 794) in approximate position 36-50.7 north, 75-09.6 West, to determine the results of demolition work done in the spring of 1944. The proposed wire drag was delayed by non-availability of a vessel in this area to conduct the work, this command was advised.

2. Ref (b), ComFive requested further demolition to assure a clearance of at least fifty (50) feet, since the best clearance claimed following the 1944 demolition had been "in excess of 40 feet".

3. On 6 and 7 Aug 1945, the salvage Ship HARJURAND undertook to locate the wreck of the Spring Chicken to conduct the demolition work requested in ref (b), and after dragging the bottom for a radius of 1500 feet from the marker buoy (Wreck Lighted Buoy "F" quick flashing red) succeeded in locating the wooden bottom of a vessel in approximately 93 feet of water, with wooden ribs projecting two or three feet above the bottom. This wreckage lay approximately 550 feet 315 degrees True from the wreck buoy, whereas the Spring Chicken wreck was charted 500 feet 263 degrees from the buoy. The Captain of the HARJURAND reported he believes this ship bottom to be the remains of the Spring Chicken wreck, and estimates there is a clearance of 90 feet of water above the wreck at mean low water.

4. ComFive submits the above facts for your information in connection with its renewed request for a wire drag of this area to determine the least depth of water to be found in this vicinity.

5. You are requested to communicate the results to both this command and DCGO 5ND, in order that DCGO may consider the advisability of removing the marker buoy if sufficient clearance is indicated.

/s/ R. S. Crenshaw  
Assistant Commandant

CG  
DCGO 5ND CESF  
BuShips  
Dir USC & GS, Wash DC  
US Dist Engr., Norfolk, Va.  
Supt. Salvage, 17 Battery Pl., NY.

2579(48) #5

418 P.O. Building, Norfolk, Virginia

26 July 1948

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

Subject: Special Report on Wrecks  
Wreck No. 748, John Morgan

Sonar search for this wreck was initiated using the new location of Wreck No. 729 and their relative charted positions. Contact was made and a marker buoy placed to aid in fathometer verification. The minimum depth recorded was 65 feet.

The wreck of the John Morgan is located in:

Lat. 37° -00.10' ✓  
Long. 75° -24.50' ✓

A drag set to an effective depth of <sup>52</sup>53 feet hung the wreck. A drag set to an effective depth of <sup>51</sup>52 feet cleared the wreck. Recommended charting depth <sup>51</sup>52 feet.

Sheran control was used in the execution of this survey.

Survey based on predicted tides off Cape Henry.

/s/ A.C. Thorsen  
Lt. Comdr.  
Comdg. Ships  
PARKER, BOWEN & STIRNI

cc/ Supervisor  
S.E. District

1579 (1948) #1

418 P.O. Building, Norfolk, Virginia

26 July 1948

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

Subject: Special Report on Wrecks  
No. 729 Lillian Luckenback

Smith Wreck South Lighted Bell Buoy No. 2 is located in:

Lat.  $36^{\circ}-58.13'$  ✓  
Long.  $75^{\circ}-25.83'$  ✓

This is about 0.65 mile S.W. of charted position.

A Sonar search was first made in the vicinity of the buoy with negative results. Sonar search lines were then run from the buoy in the direction of the charted position of wreck. Contact was made with wreck at a distance of 1/2 mile. The contact was followed and when passing over wreck a marker buoy was dropped. Fathometer verification was made, shallowest sounding recorded was 63 feet.

Wreck No. 729 is located in:

Lat.  $36^{\circ}-58.60'$  <sup>57</sup>  
Long.  $75^{\circ}-24.88'$  <sub>84</sub>

A drag set to an effective depth of  $54\frac{1}{2}$  feet hung the wreck. A drag set to an effective depth of  $52\frac{1}{2}$  feet cleared the wreck.

Recommended charting depth 52 feet. ✓

Both ends of the wreck were hung about 400 feet apart in a north-south direction.

Sheran control was used in the execution of this survey. Survey is based on predicted tides off Cape Henry.

cc/ Supervisor  
S.E. District.

/S/ A.C. Thorsen  
Lt. Comdr.  
Comdg. Ships PARKER, BOWEN & STIRNI

L579(48) #2

418 P.O. Building, Norfolk, Virginia

5 August 1948

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

Subject: Special Report on Wrecks  
Wreck No. 278, Francis E. Powell

The wreck of the Francis E. Powell was located by Sonar contact at:

Latitude 36° -49.03' ✓  
Longitude 75° -23.85' ✓

The buoy marking the wreck at time of contact was located at Latitude 36° -49.0' and Longitude 75° -23.94'. In order to facilitate operations the Coast Guard moved this buoy and it ~~is~~ <sup>was</sup> now located at:

Latitude 36° -49.57' ✓  
Longitude 75° -23.94' ✓

A drag set to an effective depth of 57 feet hung the wreck.

A drag set to an effective depth of 55 feet cleared the wreck.

Recommended charting depth 55 feet.

This survey was based on predicted tides off Cape Henry.

Sheran control was used in the execution of this survey.

/S/ A.C. Thorsen  
Lt. Comdr.  
Comdg. Ships  
PARKER, BOWEN & STIRNI

cc/ Supervisor S.E.  
District.

L 579 (1948) #3

418 P.O. Building, Norfolk, Virginia

11 August 1948

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

Subject: Special Report on Reported Obstruction  
Paragraph 8, Supplemental Instructions  
Project CS-326, 5 March 1948

Item 27

The obstruction in Latitude  $37^{\circ} -04.0'$  and Longitude  $75^{\circ} -10.9'$ , was reported by the U.S.S. Ellyson in February 1947 and published in Notice to Mariners No. 11, 1947. The obstruction was located during sweeping operations and reported to have a clearance of 40 feet.

An area within a radius of one mile from the reported position was dragged in excess of 80 feet without a hang.

A 7800 foot drag having an effective depth of 84 feet was towed north over the western portion of the area. Lift in this drag was from 2 to 3 feet. The same drag was towed east and an overlapping strip dragged south. While towing in a southerly direction over the eastern portion of the area a uniform lift of 8 feet was obtained throughout the drag. The effective depth of the eastern strip was 82 feet. Dragging conditions were ideal, no wind and a flat sea. Dragging speed indicated a southerly surface current. However, the lift and behavior of the float over the testing red indicated a sub-surface set to the north.

Sheran reception was excellent. The distance from station CAPE reached a maximum of 53 miles.

26-25 (1948)

In accordance with telephonic conversation with the Chief, Division of Coastal Surveys, it was decided that dragging operations were sufficient to disprove the existence of an obstruction having an approximate clearance of 40 feet in the charted position.

cc/ Supervisor, S.E.  
District.

/s/ A.C. Thorsen, Lt. Comdr.  
Comdg. Ships PARKER, BOWEN & STIRNI

418 P.O. Building, Norfolk, Virginia

20 August 1948 .

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

Subject: Special Report on Wreck No. 794  
SPRING CHICKEN

Following are locations of wreck buoy and obstructions  
in vicinity of buoy:

	<u>Latitude</u>	<u>Longitude</u>
Red Flashing Buoy "F"	36°-51.18'	75°-11.56'
Obstruction No. 1	36°-51.33'	75°-11.56'
Obstruction No. 2	36°-51.34'	75°-11.74' <i>- on bottom</i>
Obstruction No. 3	36°-51.27'	75°-11.58'

Although the information regarding the above buoy as indicated in Notice to Mariners No. 3, 18 January 1948 is confusing, local information confirmed the fact that this buoy was not physically moved from its original position. In view of this fact this survey was initiated on the basis of the HARJURAND report (copy attached hereto). A drag was set out north of the buoy and towed south. Buoys N-6 were set at 90 feet (effective depth 84') and buoys 7-F were set at 110 feet thru an error by the end launch. No tests were obtained in sections 7-F due to testing line being only 100 feet in length. This drag fouled on obstructions No. 1 and No. 2 above. In picking up the drag the BOWEN was unable to clear buoy No. 7. The PARKER hauled in this section and brought to the surface a section of a wooden hull about 8 feet square. The section contained three 6" x 8" ribs covered with 4-inch planking. The curvature of the ribs indicated a section of the hull near the stem. An effort was made to haul the wreckage aboard but inadequate handling gear made this impossible.

Obstruction No. 3 was hung with a drag set to an effective depth of ~~82~~<sup>81</sup> feet.

A drag set to an effective depth of ~~79~~<sup>78</sup> feet cleared all obstructions.

*2 579(48) #5*

A drag strip 1 mile wide extending 3.8 miles SE of buoy having an effective depth of 75 feet and centering on the charted position of the wreck indicated no obstructions in that vicinity. The 72 foot shoal in Lat.  $36^{\circ}50.5'$  and Long.  $75^{\circ}10.4'$  was verified by fathometer soundings while towing launch passed south of the location. *\*12 fms. on R-3792, cleared by T44\**

A drag set to 90 feet, set out about 1 mile south of buoy grounded throughout. Fathometer soundings obtained while picking up this drag (reduced for tide) varied from 82 to 86 feet.

It is recommended that wreck symbol be moved to position of obstruction No. 3 above.

Recommended charting depth (obstruction No. 3) <sup>78</sup> 79 feet.

This survey was based on predicted tides off Cape Henry and was Sherman controlled.

/S/ A.C. Thorsen  
Lt. Comdr.  
Comdg. Ships  
PARKER, BOWEN & STIRNI

ADDENDUM

To Accompany

WIRE DRAG SURVEY H-7679 W.D. (Field No. P.B.S.-4348 W.D.)

General

With the exception of Chesapeake Bay Approach Lighted Whistle Buoy, all wreck buoys have been removed from this area.

Discrepancies

Wire Drag hangs on Wreck #748 have been plotted with best available data, however, line 16 to 33D cleared an obstruction at 56½ feet which was later hung at 52½ and 53½ feet. There is a possibility the drag pulled over the obstruction.

*On smooth sheet - hung at 52' cleared at 51'*

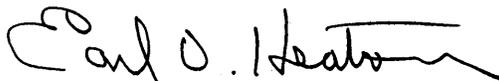
Respectfully submitted,



Hugh L. Proffitt  
Cartographer

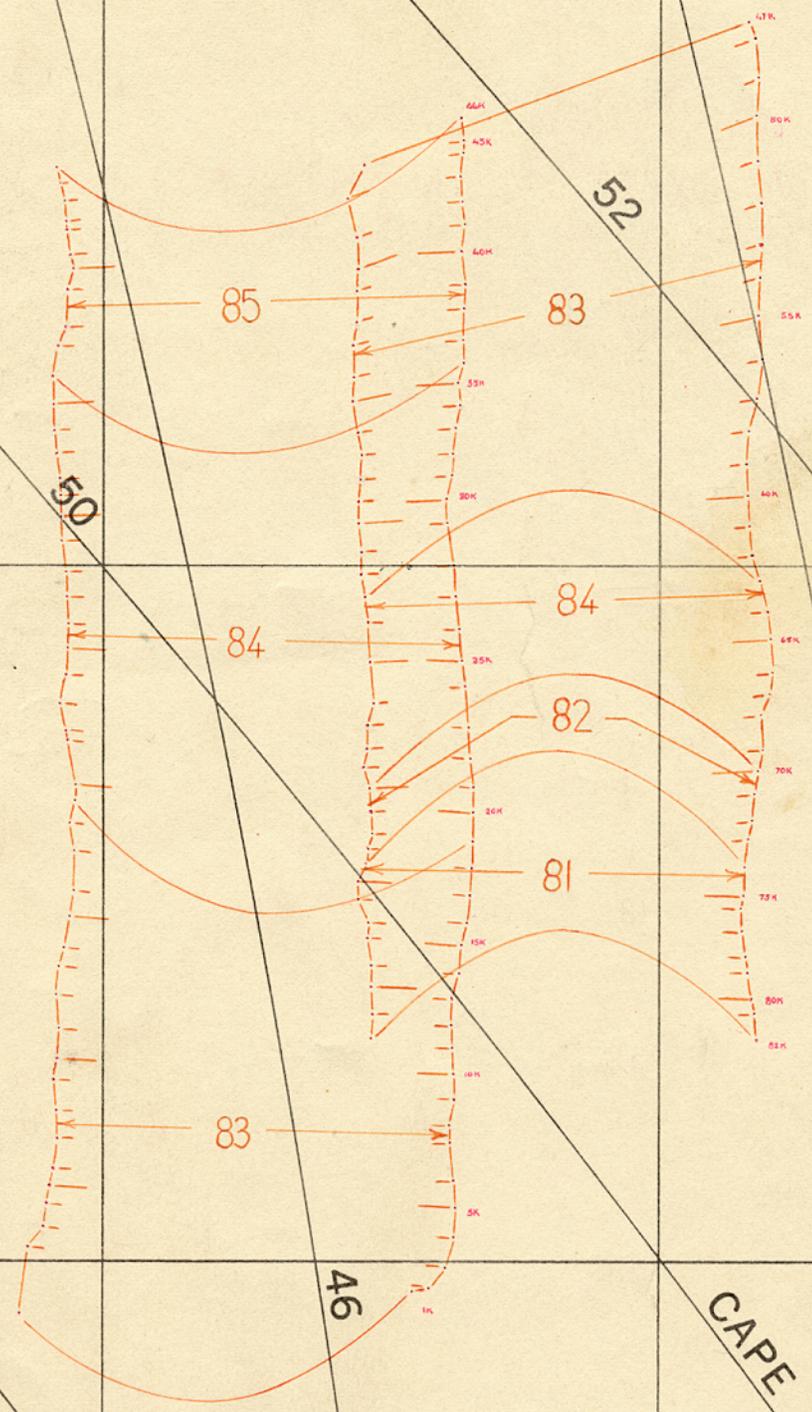
Norfolk, Virginia  
12 December 1949

Approved and forwarded.



Earl O. Heaton  
Supervisor, SE Dist.

06'  
54



37° 04'

ITEM #27

HEN  
48

02'

CAPE

F. E. No. 4-1949

Scale 1:40,000

Sheet 1 of 4

12'

75° 10'

08'

44



32

34

52'

HEN 36

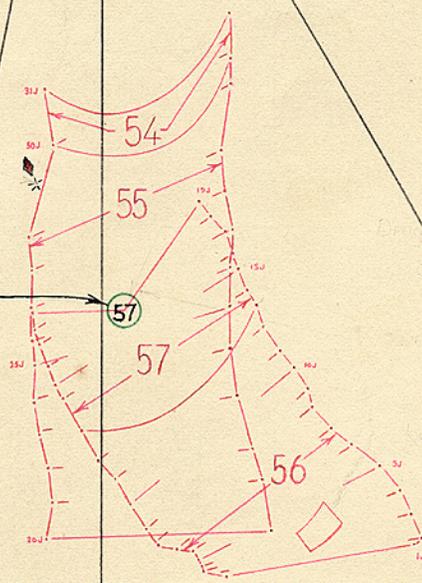
CAPE

36° 50'

WRECK 278

*This is  
lost by the  
unknown  
40 15  
WR list*

Cleared by 55



36

48'

F. E. No. 4, 1949

Scale 1:40,000

Sheet 3 of 4

30

28

26'

75° 24'

22'

44 CAPE

WRECK 794

42

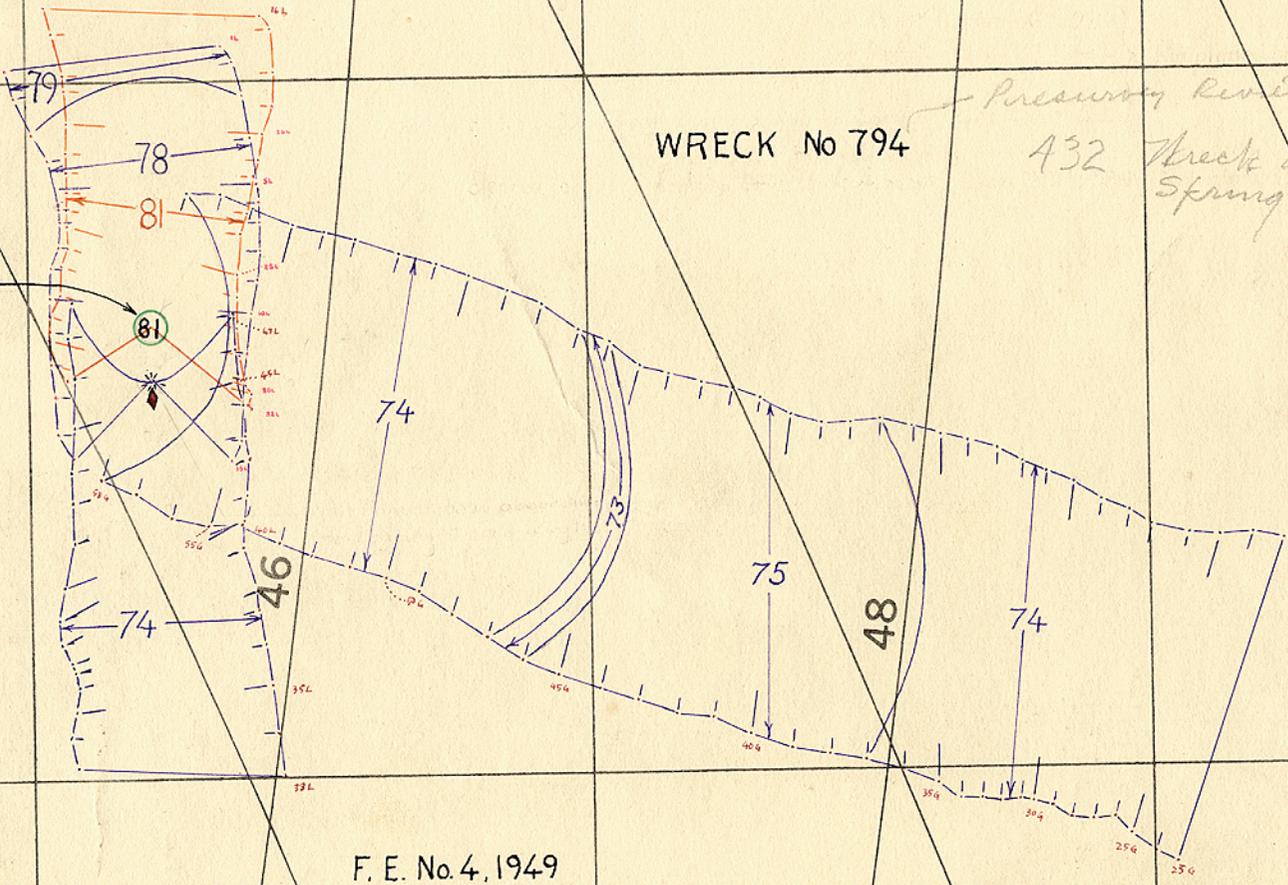
52'

WRECK No 794

Presurvey Review No  
432 Wreck List No.  
Spring Chicken

Cleared by 78

44 HEN



F. E. No. 4, 1949

Scale 1:40,000

Sheet 4 of 4

172'

75° 10'

08'

50

36° 50'

## TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

24 January 1950

Division of Charts: R. H. Carstens

Plane of reference approved in  
~~volume of sounding records~~

7 volumes of Wire Drag records for FE. No. 4 1949

HYDROGRAPHIC SHEET

Locality Approaches to Chesapeake Bay

Chief of Party: A. C. Thorsen in 1948

Plane of reference is mean low water, reading  
3.6 ft. on tide staff at Hampton Roads (NOB)  
13.4 ft. below B. M. 6 (1927)

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

Condition of records satisfactory except as noted below:

NOTE: These tide reducers were verified by means of Hampton Roads observations using the following allowances at the working grounds.

Time of Tide

-1 hr. 05 min.

Height of high water

+0.3 ft.

*E. C. McKay*  
Section

Chief, ~~Division~~ of Tides and Currents

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. F.E. No. 4 (1949) W.D.

Records accompanying survey:

Boat sheets ..2...; sounding vols. .1....; wire drag vols. 6.....;  
 bomb vols. ....; graphic recorder rolls 1 envel.  
 special reports, etc. 1 Envel. containing drag strip overlays  
 .....

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

Number of positions on sheet	.....	494
Number of positions checked	.....	39
Number of positions revised	.....	
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. J. Evans* ..... Total time 14 hrs. Date 10 Oct. 1950

Reviewed by *J. J. Jordan* ..... Time 2 hrs. Date 2 Nov 1950

REVIEW OF FIELD EXAMINATION NO. 4, 1949

This field examination was made for the purpose of investigating four sunken wrecks and a reported obstruction falling on Chart 1109 off the entrance to Chesapeake Bay.

The sunken wrecks or wreckage were detected by Sonar and then wire dragged, using Shoran for control. The areas within a one mile radius of the reported obstructions were dragged, and no other obstructions were found.

The results of the examination are tabulated on the obstruction data sheet in the Descriptive Report. The wire drag work was plotted on a large smooth sheet which has been cut into the four sections retained for filing with the Descriptive Report.

The field examination was applied to Chart 1109 before verification. The current print (50-6/5) is in agreement with the verified work. The marker buoys were removed subsequent to the examination.

The Descriptive Report and attached correspondence adequately cover all matters pertaining to this examination. No further discussion is necessary.

G. F. Jordan

Inspected by: R. H. Carstens  
November 2, 1950

