

FE255

Diagram No. 1222-4

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic
Field No. R/H-10-1-84
Office No. FE-255

LOCALITY

State Virginia
General Locality Chesapeake Bay
Locality 3 Miles SE of New Point
..... Comfort Shoal
..... 1984
..... CHIEF OF PARTY
..... LCDR D.D. Winter

LIBRARY & ARCHIVES

DATE September 13, 1984

U.S. GOV. PRINTING OFFICE: 1980-766-230

FE255

Area 2
Ref L-605/84

CM:

12238
12224
12221
12220
13003-10

} See Record of Application to Chart
to sign off.

HYDROGRAPHIC TITLE SHEET

FE-255

INSTRUCTIONS - 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.

R/H 10-01-84

State Virginia

General locality Chesapeake Bay

Locality 3 MILES SE OF NEW POINT COMFORT SHOAL
AWOIS Item #3191

Scale 1:10000 Date of survey 17 April ^{TO 27 APRIL AND} 23 May, 1984

Instructions dated 22 December, 1983 Project No. OPR-E609-RU/HE-84

Vessel NOAA Ships RUDE & HECK

Chief of party LCDR. Donald D. Winter

Surveyed by LCDR. D.D. Winter, LT. N.G. Millett, LT. E.M. Clark, ENS. T.G. Callahan

Soundings taken by ~~echo-sounder, hand lead, and~~ PNEUMATIC DEPTH GAUGE
Pneumofathometer

Graphic record scaled by E.M.C., T.G.C., M.J.K.

Graphic record checked by D.D.W., N.G.M., E.M.C.

Protracted by N/A Automated plot by SYNETICS 1201 PLOTTER (AMC)

Verification by C.D. MEADOR

Soundings in ~~meters~~ feet at MEW MLLW corrected for predicted tides.

REMARKS: All times recorded in UTC.

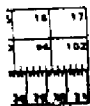
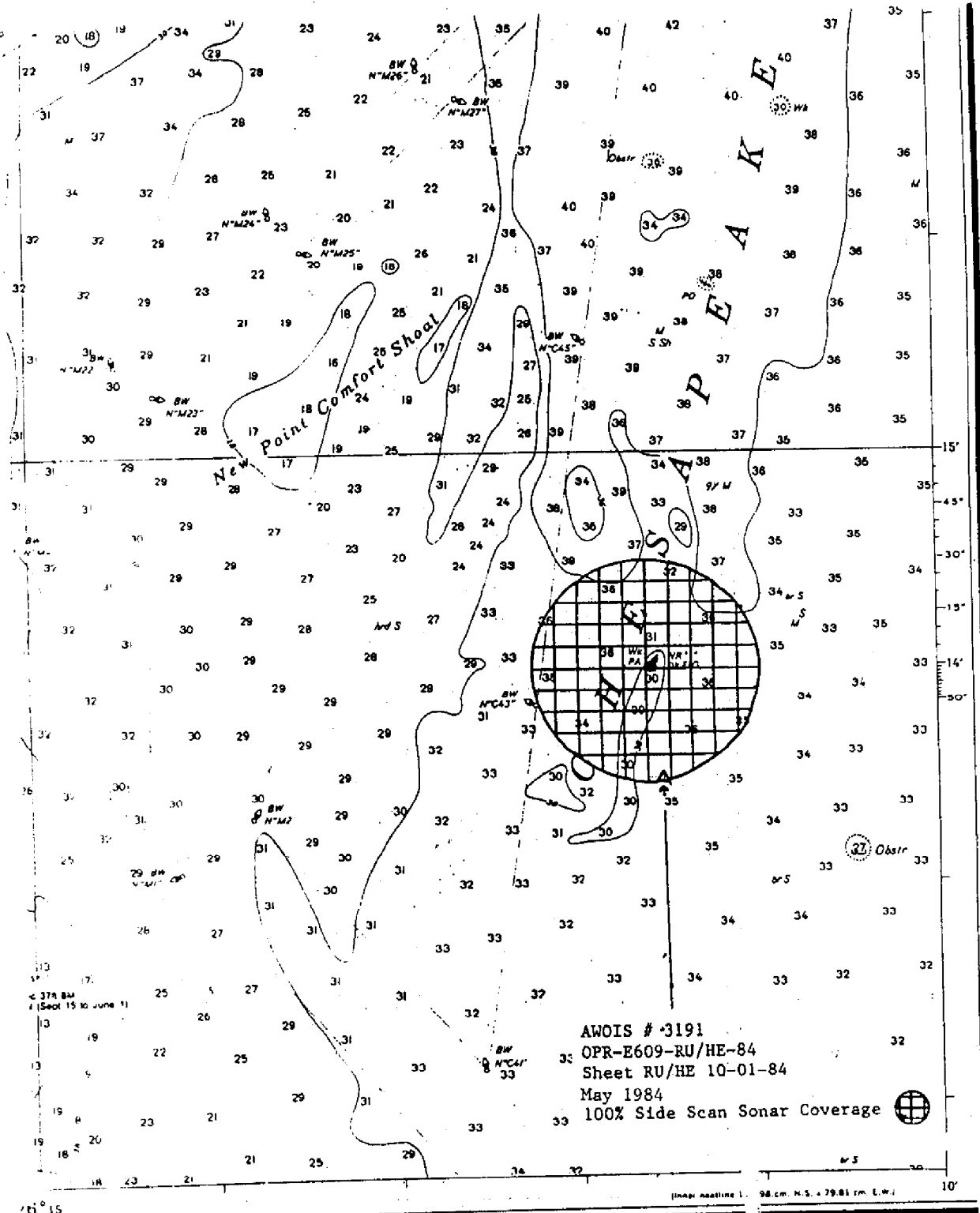
NOTES IN RED WERE MADE DURING OFFICE PROCESSING.

STANDARDS CK'D 9-19-84

C. Loy

AWOIS CM SM 9/24/84

SURF CM SM 9/24/84



(Mobjack Bay and York River Entrance)

12238

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DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY N^{FE-256}, R/H 10-01-84
1:10,000 SCALE, 1984
NOAA SHIPS RUDE & HECK
LCDR DONALD D. WINTER, COMDG.

A. Project Authority

This project was conducted in accordance with Hydrographic Project Instructions OPR-E609-RU/HE-84, dated 22 December, 1983. There are no changes or additions to these original instructions. The purpose of this project is to verify or disprove certain charted submerged wrecks and obstructions in the southern part of Chesapeake Bay. Detached positions, least depths, or wire-drag clearances were to be obtained for these submerged wrecks and obstructions.

B. Characteristics and Limits of Area Surveyed

This report covers the area bounded by the 0.5 nautical mile search radius about the charted position of AWOIS Item #3191, latitude 37-14-00.0N, longitude 076-11-36.00W.

C. Survey Vessels

The NOAA Ships RUDE, Vesno 9040, and HECK, Vesno 9140, were the only vessels assigned to this survey. NOAA Ships RUDE and HECK obtained the detached positions and performed the side scan sonar work during this survey.

D. Hydrographic Sheets

The hydrographic sheets used in this survey were made of mylar and were constructed with the Digital PDP 11/34 computer and Houston Instruments roll-bed plotter aboard the Ship RUDE. The project instructions required that all data be smooth plotted at a scale of 1:20,000 but a scale of 1:10,000 was used for all field plotting and final data analysis.

The field sheets were plotted at a scale of 1:10,000 and were used to hand plot the towing vessel's position while on line. A smooth field sheet was also plotted aboard the RUDE using the same equipment as described above. This smooth field sheet was used to machine plot the towing vessel's position during side scan operations and the the least depth detached position of AWOIS Item #3191. The detached positions over the item and the position of the buoy in the vicinity were also machine plotted on this smooth sheet. An additional wreck plot overlay was constructed indicating the limits of the wreck as determined using only the side scan sonar data. The field records are being sent to the Atlantic Marine Center for final verification and smooth plotting.

E. Equipment and Techniques

(1) Survey Operations

All survey coverage was accomplished with the Klein side scan sonar systems. A Klein system was provided for each ship by the Atlantic Marine Center. This system consisted of a Model 521 recorder, S/N 088 issued to the RUDE and S/N 249 on the HECK, a 100 KHz towfish, a K-Wing depressor and a towcable. One hundred per cent (100%) side scan sonar coverage of the required search area with 100m track spacings using the 100m scale resulted in the location of a wreck, which was investigated by divers. Additional lines were side scanned on 75m and 50m range scales to recon the wreck location and to identify suspected contacts. One area of a suspected contact was side scanned in excess of 400% coverage, on the 100m, 75m and 50m range scales.

Del Norte rates obtained on fixes were recorded with an Eaton Model 7000+ serial printer during this survey. This printer worked fairly well considering the fact that it was not designed to be operated in a marine environment. The printer would often type out a line of meaningless characters or rates from the previous fix before the current fix was recorded. The printer records were annotated such that these meaningless characters and extraneous rates were lined out leaving the correct fix rates clearly displayed.

Two Raytheon model DSF 6000N echo sounders, S/N B051N onboard the NOAA Ship RUDE and S/N A116N installed on the HECK, were operated and annotated during all side scan sonar operations. The echo sounder recordings were reviewed daily to ensure that no large objects located directly under the sonar towfish went undetected. A Raytheon model DE-719B, S/N 5497 was operated for comparisons with the DSF 6000N echo sounders on JDs 108, 110 and 111. This is the second survey conducted with the model DSF 6000N echo sounding system and it was apparent from the comparisons on JDs 108, 110 and 111 that the internal gain setting of the DSF 6000N is much higher than that of the Raytheon DE-719B, which was used previously aboard the RUDE and HECK. The gain control settings for both the high and low frequencies were set on "MANUAL" during nearly all operations. The echo sounder was operated at a depth of less than 50 feet, on the high frequency and the 0-50 foot range scale throughout all operations. The resulting trace indicates many contacts in the water column or a rebounding of the high frequency from very small objects or fish. On JD 109, manual gain settings were used, resulting in a much better tracing. Additional adjustments were also made to the paper speed on JD 115 from 60mm/min. to 30mm/min., resulting in a significant change in the clarity of the fathogram. It is recommended that the gain controls of this echo sounding system be manually tuned and operated at a speed of 30mm/min. during operations in shallow water, for optimum results. However, even with the gain settings on manual and a slower paper speed, numerous spurious contacts were noted as a result of high internal gain within the DSF 6000N fathometer.

Although it is not anticipated that these sounding records will be used for charting purposes, the settlement and

squat data for the RUDE and HECK, obtained in Norfolk Harbor on 25 January 1983, is included in this report. No velocity corrections or settlement and squat determinations were actually conducted within or during this project.

(2) Diving Operations

A total of five (5) dives were conducted for AWOIS Item #3191, which established, on JD 117, a least depth, corrected for predicted tides, of 33.5 feet MLLW, at the position latitude 37-13-29.93N, longitude 076-11-30.44W. The item is the steel hull of a vessel 60 feet LOA, with a beam of 20 feet, oriented on the centerline from stern to bow at 091 degrees true and is missing the superstructure. This superstructure had been broken off and pieces of debris are lying off the starboard quarter aft of the vessel.

The item was located at the end of the first dive of JD 115, April 24, 1984 by circle search techniques at a distance of approximately 60 feet from a marker buoy deployed by the NOAA Ship HECK. A second dive was conducted on JD 115 as a recon of the wreck to determine an approximate location of least depth with wrist depth gage on the perimeter of the main deck. The marker float was moved and secured to a set of bitts 18 feet aft of the bow on the port side. The remainder of the dive was spent running search arcs originating from the bow with an increasing radius, covering the forward 30-35 feet of the hull and main deck. The wreck was found to be the steel hull of a vessel that was oriented 091 degrees true along the centerline towards the bow. The hull of the wreck was down slightly in the bow and had a 5-10 degree list to starboard with the starboard side level with the bottom sediment.

Three dives were conducted on JD 117 and completed the survey of the hull. Dive one investigated the after portion of the vessel and revealed that the superstructure of the vessel was missing. A radius sweep of 20 feet conducted about the kingpost on the stern established that the debris of the superstructure was astern of the hull and to the starboard side. All the depths taken on the superstructure debris were found to be deeper than the least depth at the marker float.

~~PNEUMATIC DEPTH GAUGE~~
~~Pneumofathometer~~ The second dive obtained the least depth, using #78996, at the position of the marker float. Two readings were taken when the surge of the survey launch pulled the hose away from the divers.

On the third and final dive, three consecutive least depth readings taken at the marker float and three maximum depths, adjacent to the least depth position, were also recorded. The least depth, reduced for predicted tides, was 33.5 feet MLLW (Ref: National Tidal Datum Correction of 1980). The remainder of the third dive was spent taking exact measurements of the hull with a cloth survey tape. These measurements show the hull to be 60 feet LOA and having a beam of 20 feet. A detailed drawing is provided in Appendix F.

F. Control Stations

Three electronic control stations were used for this section of the survey. These stations were:

Station Name	Latitude	Elev.
THIMBLE SHOAL LIGHTHOUSE(1919)	37-00-51.712N 076-14-25.075W	16.76m
YORK SPIT LIGHTHOUSE(1900)	37-12-34.452N 076-15-16.369W	11.28m
WOLF TRAP LIGHTHOUSE(1898)	37-23-24.618N 076-11-23.295W	15.85M

These stations were located by NGS and the adjusted positions for these stations were obtained from published NGS horizontal control data. All stations are of Third-Order, Class I control accuracy or better. The station positions are based upon the North American Datum of 1927.

G. Calibration and Position Control

Vessel positioning for all work was accomplished with the Del Norte 520 series electronic positioning equipment operated at a frequency of 9400 MHz in the range-range mode. A listing of the DMU and master units used by the vessels during this survey is listed by Julian day in Appendix A. Remote unit 78, S/N 2986, was installed at THIMBLE SHOAL LIGHTHOUSE and WOLF TRAP LIGHTHOUSE. The remote installed at YORK SPIT LIGHTHOUSE was unit 72, S/N 2897.

One baseline calibration was performed during this survey. The baseline calibration was conducted in the immediate work area and entirely over water in accordance with AMC ORDER 79. Baseline calibration distances were determined by the HP 3800A electronic distance measuring instrument, serial number 0987A00157. The baseline used for the calibration ran from the Little Creek Coast Guard, western most pier, to the Little Creek East Jetty Light "1". The distance of this baseline, as measured by the HP 3800A, was 2183.14m.

A baseline calibration of remote units 72 and 78 was performed on 16 April, 1984 (JD 107) to determine the corrections to be applied to the raw data collected during this survey. The Del Norte 520 positioning system will be rebaselined at the completion of OPR-E609-RU/HE-84 and transmitted at a later date.

The opening and closing daily calibration checks for this survey were accomplished using the three point sextant fix calibration method in accordance with the Hydrographic Manual Section 4.4.3.3. The points used for JDs 108 thru 118 were as follows: left object 24, FOX HILL MUNICIPAL WATER TANK (1939); center object 1, YORK SPIT LIGHTHOUSE (1900); right object 15, NEW PT COMFORT LIGHTHOUSE (1871); and left check object 23, TOW (1947). On JD 144 for the opening calibration the points used were: left object 4, CHERRYSTONE BAR LIGHT (1954); center object

26. OLD PLANTATION FLATS LIGHT (1984); right object 10, CAPE CHARLES 77154 AN/FPS TOWER (1959). The closing calibration was performed using the following points: left object 2, WOLF TRAP LIGHTHOUSE (1898); center object 15, NEW POINT COMFORT LIGHTHOUSE (1871); right object 1, YORK SPIT LIGHTHOUSE (1900). No check object was available for JD 144 due to haze. These objects are fully described in Appendix D.

The daily correctors for all calibrations were stable and within accuracy tolerances for a survey of this scale. Therefore, only baseline calibration data should be applied to the raw position data during final processing and smooth plotting. See Appendix A. for daily calibration data.

The ~~Pneumatic~~ ^{PNEUMATIC DEPTH GAUGE} ~~depth~~ ^{depth} gauge was calibrated on the 13 March, 1984, JD 73, at Buoy "T", of Thimble Shoal Channel, east of Point Comfort, position latitude 37-02-30N, and longitude 076-17-06W. All depths determined by this survey have been corrected for instrument error, as determined in Appendix G.

H. Dates of Survey

This survey was begun on 17 April, 1984 (JD 108) ^{THROUGH 27 APRIL (JD 118)} and completed on 23 May, 1984 (JD 144).

I. Reduction and Processing of Data

All side scan data was initially recorded in NOAA Form 77-44, Soundings Volume. All header data, position numbers, time, and position control data were recorded in the appropriate columns in the volumes. The remarks column was used to record all on-line information, vessel rams, length of towcable, measured from the waterline to the towfish, vessel headings, and any other unusual or noteworthy remarks. The towfish layback was computed using only the stern to antenna distance, 21.3 meters, since the K-wins depressor was used with a short tow cable and the towfish maintained a nearly vertical towcable angle. Position data from the side scan sonar work was entered in the Digital PDP 11/34 computer with a modified version of the R/H Double Precision Wire-Dras program. Rates for just one vessel were entered in this program and a single vessel position plot was then generated with the Houston Instruments roll-bed plotter. All side scan sonar work for this survey was plotted in this manner. The 1983 versions of the RUDE and HECK wire dras programs were used to plot all data on this field sheet.

The sonagrams from the side scan sonar work were examined while on line and then again at the end of the day. All contacts seen on AWCIS Item #3191 were flagged during each examination. These flagged contacts were then logged in the Side Scan Sonar Target Abstract for that field sheet. The Target Abstract was then completed and the item was plotted on the smooth sheet containing the vessel position plots. The towfish layback was computed by using only the stern to antenna distance (21.3m) due to the fact that a very short length of towcable was used during all side scan sonar operations. The short lengths of the towcable, 10-18 feet, plus the action of the K-wins caused the towfish to ride straight down off the stern, with nearly a

vertical towcable angle. An odyssey protractor was used to plot the layback and the range to target. All values of towcable length on the sonagram and in the soundings volumes refer only to the amount of cable out from the waterline to the towfish. The Side Scan Sonar Target Lists were then compiled from the Target Abstracts and the contact plots. The Del Norte rates of the contact positions were determined using a grid and arc overlay. These rates were then used to determine the latitude and longitude of the contact with the HP 9815 computer and the Geodetic Package program.

J. Junctions and Splits

There were no junctions or splits contained within the limits of this survey area.

K. Comparison with Prior Surveys

The survey area is contained within the limits of prior survey H-7750 (1950). There is no indication on H7750 (1950) of this wreck or any other obstruction within the limits of this survey area. ~~THERE ARE DEPTHS OF 34-38 FT. IN THE AREA ON THE PRIOR SURVEY.~~

L. Comparison With the Chart

The largest scale chart which contains the survey area is NOS Chart 12238. The current edition of this chart at the time of survey operations was the 26th Ed., Feb. 12/83 and was used for all chart comparisons.

The position of the contact identified as AWDIS Item #3191, as determined by this survey, plots to the south of the "Wk PA" at latitude 37-14-00.00N, longitude 076-11-36.00W, and also south of the buoy charted as WR "1", Qk Fl G. A detached position of the least depth, established by divers on JD 117 by the NOAA Ship HECK, was at latitude 37-13-29.99N, longitude 076-11-30.44W, with a least depth, ~~corrected for predicted tides,~~ of 33.7 feet MLLW. A complete description of the contact can be found in Section E.(2) and Appendix F.

The positions of the two floating aids to navigation reported to be on this field sheet were checked during the course of this survey. The position obtained on Buoy BW N "C43", latitude 37-13-53.33N, longitude 076-12-24.42W, on JD 115 was 0.15 nautical miles west of the charted position. The buoy charted at latitude 37-14-00.00N, longitude 076-11-34.00W listed as "Wk PA", WR "1", Qk Fl G has been removed, as described in the Local Notice To Mariners 29/83, 5th Coast Guard District Light List #3217.50 for NEW PT. COMFORT SHOAL WRECK LIGHTED BUOY WR "1", page 2 of 12.

All presently charted landmarks in the proximity of this survey were visually verified from offshore and are adequate as charted. No additional landmarks or aids to navigation were noted in the area as suitable for charting.

Charting Recommendation

Chart a wreck (Wreck over which depth is known) as per Section 0.15, page 13, NOS Chart 1, Seventh Edition, January 1979, at latitude 37-13-29.7³⁰N, longitude 076-11-30.4³⁰W, with a least depth, ~~reduced for predicted tides,~~ of 33.5⁰ feet MLLW. Remove the Wreck "Wk PA" at latitude 37-14-00.00N, longitude 076-11-36.00W. Also, remove the charted buoy WR"1", Qk Fl G at latitude 37-14-00.00N, longitude 076-11-36.00W, since this buoy is no longer on station. CONCUR

M. Adequacy of Survey

AWDIS Item #3191 was completely and thoroughly investigated by divers during this survey operation. The least depth and detached position of this wreck are accurate and considered adequate for charting. One hundred percent side scan sonar coverage of the survey area identified no additional contacts.

N. Incomplete Items

There are no incomplete items contained in this survey.

O. Currents and Winds

Tidal currents were closely monitored during the course of this survey, since diving operations were planned to coincide with slack water whenever possible. Comparisons were made with the Tidal Current Tables 1984, Atlantic Coast of North America for station 5271, York Spit Light.

In general, the times and strengths of maximum current and times of slack water agreed with the predicted times and strengths under normal conditions. However, this entire area is greatly influenced by North, Northwesterly and Southeasterly winds, which considerably prolongs or reduces the tidal currents, depending on wind direction and duration.

P. Personnel

The officers participating in this survey were LCDR Donald D. Winter, LT Neal G. Millett, LT Edward M. Clark, and ENS Thomas G. Callahan.

Q. General Notes

The format of this report is a composite of the Descriptive Report formats contained in the Wire Drag and Hydrographic Manuals. This format is the optimum composite of the pertinent sections of the two reports and is more applicable to the surveys currently being conducted by the RUDE and HECK.

Loran C rates for the 9960 chain at the wreck least depth position were: X-27255.4, Y-41459.9 and Z-58547.4. This position was obtained with the Northstar 6000 Loran receiver, serial number 70460, onboard the RUDE on JD 117.

On JD 115 a suspected contact was observed on side scan sonar by the RUDE, on the 50m scale, while on a turn and just outside the defined survey area. The suspected contact was located between two lines 100m apart and due North of buoy "C43". Additional side scan sonar coverage was accomplished on JDs 117, 118 and 144 at the location of this suspected contact. This side scan sonar search resulted in excess of 400% coverage of the area using the 50m, 75m and 100m scales. The 400% coverage did not locate this suspected contact. Since the additional coverage meets the disproval criteria for this item, the suspected contact was thought to be some material suspended in the water column or a surface reflection of a crab boat near the RUDE at the time of the turn. It is recommended that no obstruction be charted at the suspected contact position, nor is any further work required on the suspected contact.

Charting recommendations for this survey are contained in section L. of this report.

For recommendations concerning the DSF 6000N sounding system, refer to section E.1.

Respectfully submitted,

Edward M. Clark Jr., LT., NOAA

R. APPROVAL SHEET

OPR-E609-RU/HE-84

R/H 10-01-84

AWOIS ITEM #3191

Field operations contributing to the accomplishment of this survey were conducted under my supervision with frequent personal checks of progress and adequacy. This report and field sheets have been closely reviewed and are considered complete and adequate for charting.



Donald D. Winter, LCDR, NOAA

Commanding Officer

NOAA Ships RUDE and HECK

C. HORIZONTAL CONTROL

No new stations were established for this survey. See Appendix D., Signal List for a complete listing of all stations used on this survey.

D. SIGNAL LIST

PROJECT:

~~OPR-6609-RWHB-89
CHESAPEAKE BAY~~

SIGNALS/STATIONS

~~YORK SPIT LIGHTHOUSE
(1900)~~

~~ID NBR 1
LAT 371234.452
LON 761516.369
ELEV'N 11.28 M
FILE 1~~

~~WOLF TRAP LIGHTHOUSE
(1898)~~

~~ID NBR 2
LAT 372324.618
LON 761123.295
ELEV'N 15.85 M
FILE 2~~

~~THIMBLE SHOAL
LIGHTHOUSE (1909)~~

~~ID NBR 3
LAT 370051.712
LON 761425.875
ELEV'N 16.76 M
FILE 3~~

~~CHERRYSTONE BAR
LIGHT (1954)~~

~~ID NBR 4
LAT 371522.825
LON 760158.208
FILE 4~~

~~CAPE CHARLES CITY RANGE
FRONT LIGHT (1952)~~

~~ID NBR 5
LAT 371445.887
LON 760128.843
FILE 5~~

~~CAPE CHARLES WATER
TANK CHAR (1914)~~

~~ID NBR 6
LAT 371604.409
LON 760038.488
FILE 6~~

~~CHEKITON, WEBSTER
CANNING CO. TANK (1939)~~

~~ID NBR 7
LAT 371732.709
LON 755734.786
FILE 7~~

~~CAPE CHARLES 771 ST
ANLERS NORTH TOWER DOME
(1962)~~

~~ID NBR 8
LAT 370803.977
LON 755704.193
FILE 8~~

~~CAPE CHARLES 771 ST
ANLERS SOUTH TOWER DOME
(1962)~~

~~ID NBR 9
LAT 370802.246
LON 755704.202
FILE 9~~

~~CAPE CHARLES 771 ST
ANLERS TOWER (1959)~~

~~ID NBR 10
LAT 370757.897
LON 755714.854
FILE 10~~

~~FISHERMAN ISLAND
NAVY TOWER (1954)~~

~~ID NBR 11
LAT 370557.897
LON 755845.131
FILE 11~~

~~FISHERMAN ISLAND
NAVY SHORAN TOWER (1957)~~

~~ID NBR 12
LAT 370551.122
LON 755845.459
FILE 12~~

~~FISHERMAN ISLAND
NAVY WATER TANK (1959)~~

~~ID NBR 13
LAT 371604.124
LON 755843.486
FILE 13~~

~~CAPE CHARLES NEW
LIGHTHOUSE (1872)~~

~~ID NBR 14
LAT 371722.088
LON 755424.577
FILE 14~~

~~NEW PT COMFORT
LIGHTHOUSE (1871)~~

~~ID NBR 15
LAT 37803.167
LON 761641.171

FILE 15~~

~~OLD POINT COMFORT
ROUND BRICK CHIMNEY (1919)~~

~~ID NBR 20
LAT 378006.375
LON 761844.521

FILE 20~~

~~SEASIDE USE (1939)~~

~~ID NBR 25
LAT 371119.428
LON 755954.063

FILE 25~~

~~OCEANVIEW MUNICIPAL
WATER TANK (1950)~~

~~ID NBR 16
LAT 365551.633
LON 761533.886

FILE 16~~

~~LITTLE CREEK NAB DESERT
COVE TANK (1955)~~

~~ID NBR 21
LAT 365514.382
LON 760942.053

FILE 21~~

~~OLD PLANTATION FLATS
LIGHT (1981)~~

~~ID NBR 26
LAT 371343.111
LON 760250.286

FILE 26~~

~~MOORE (1943)~~

~~ID NBR 17
LAT 365558.489
LON 761611.421

FILE 17~~

~~HAMPTON RADIO STATION
NYCS MAST (1958)~~

~~ID NBR 22
LAT 375217.816
LON 761828.133

FILE 22~~

~~FORT MONROE TANK
(1929)~~

~~ID NBR 18
LAT 370624.444
LON 761841.996

FILE 18~~

~~TOW (1947)~~

~~ID NBR 23
LAT 370712.122
LON 761759.258

FILE 23~~

~~CHAMBERLAIN VANDERBILT
HOTEL WEST TOWER (1942)~~

~~ID NBR 19
LAT 370003.284
LON 761846.377

FILE 19~~

~~FOX HILL MUNICIPAL
WATER TANK (1939)~~

~~ID NBR 24
LAT 370454.897
LON 761715.253

FILE 24~~

F. DIVING REPORT

DIVING OPERATIONS

Date: 24 April, 1984 (J.D.115) Unit: HECK S591; Launch HE-3

Divemaster: LT. Edward M. Clark Jr. Lead diver: LT. Edward M. Clark Jr.

Purpose of Dive: Locate and survey AWOIS Item #3191 to acquire 3 least and max depth readings with pneumofathometer #784996. Operations will use standard line pull signals: 1 (OK, stop, on the job); 2 (slack the line); 3 (Take up the slack on the line); 4 (haul away); 2-2 (purge the hose and take 3 least depth readings); 3-3 (purge the hose and take 3 max depth readings).

Equipment: Variable volume dry suits with standard scuba and accessory equipment in accordance with the NOAA Diving Regulations.

Planned Depth: Not to exceed 50' Planned Duration: Not to exceed 100 min.

Divers	IN Pressure	Out Pressure	Pressure	In Time	Out Time	Time	Depth	Comments
LT. Clark	3000	400	2600	1804	1834	30	40	
LT. Novaro	2900	500	2400	1804	1834	30	40	
LT. Clark	3000	500	2500	1910	1945	35	40	
LT. Novaro	2850	600	2350	1910	1945	35	40	

Post dive comments: AWOIS Item #3191 was located at the end of the 1st dive. During the 2nd dive a marker float was secured approx amidships on the port rail at a wrist depth of 34'. A survey from the bow aft approx 30-35' did not indicate a shoaler depth and it appears that the superstructure is missing.

Edward M. Clark Jr. LT. NOAA
Divemaster Signature

Edward M. Clark Jr. LT. NOAA
Lead Diver Signature

DIVING OPERATIONS

Date: 26 April 1984 (J.D. 117) Unit: HECK, Heck-3

Divemaster: LT. Edward M. Clark Jr. Lead diver: LT. Edward M. Clark Jr.

Purpose of Dive: The completion of the survey of AWOIS Item #3191 and the obtaining of least and max depth readings for the item. The depth readings will be obtained with pneumofathometer #784996 and standard line pull signals: 1 (OK, stop, on the job); 2 (slack the line); 3 (take up the slack); 4 (haul away); 2-2 (purge the hose and take 3 least depth readings); 3-3 (purge the hose and take 3 max depth readings).

Equipment: Variable volume dry suits with standard scuba and accessory equipment in accordance with the NOAA Diving Regulations.

Planned Depth: Not to exceed 50' Planned Duration: Not to exceed 100 min.

Divers	IN Pressure	Out Pressure	Pressure	In Time (UTC)	Out Time	Time	Depth	Comments
LT. Clark	3000	900	2100	1507	1534	27	46	
LT. Novaro	3000	1250	1750	1507	1534	27	46	
LT Clark	900	500	400	1536	1543	07	46	
LT Novaro	1250	900	350	1536	1543	07	46	
LT. Clark	3100	1000	2100	1554	1628	26	46	
LT. Novaro	3050	1350	1700	1554	1623	26	46	

Post dive comments: The completed survey of AWOIS Item #3191 is a steel hull 60' LOA with a 20' beam having wood deck on an orientation of 100' magnetic from stern to bow. The superstructure is destroyed and makes up the debris which is off the Stbd. quarter aft in an area 18-20'. The least depth was obtained on a set of bitts located amidships on the Port side

LT Edward M Clark Jr.
Divemaster Signature

LT Edward M Clark Jr.
Lead Diver Signature

ITEM INVESTIGATION

DATE: 26 APRIL, 1984 (J.D. 117)

SHIP/LAUNCH: HECK, HECK-3

LOCATION: AWOIS Item # 3191

DIVE MASTER LT. Edward M. Clark Jr.

DIVERS: LT. Clark

LT. Novaro

TIMES (UTC)

IN WATER 1507 1554

UNDER WATER 1507 1554

ON SURFACE 1543 1628

IN BOAT 1545 1633

MAXIMUM DEPTH Not to exceed 50'

DIVE DURATION Not to exceed 100 min.

PNEUMOFATHOMETER NO. # 784996

ITEM 3191

POSITION

LEAST DEPTH

TIME(UTC) DEPTH + 5 hrs

1. 1540/ 34.0

2. 1540/ 33.5

3.

BOTTOM

TIME(UTC) DEPTH

1.

2.

3.

ITEM 3191

POSITION

LEAST DEPTH

TIME(UTC) DEPTH + 5 hrs.

1. 1607/33.5

2. 1608/34.0

3. 1609/33.5

BOTTOM

TIME(UTC) DEPTH

1. 1611/36.25

2. 1611/36.5

3. 1612/36.5

ITEM

POSITION

LEAST DEPTH

TIME(UTC) DEPTH

1.

2.

3.

BOTTOM

TIME(UTC) DEPTH

1.

2.

3.

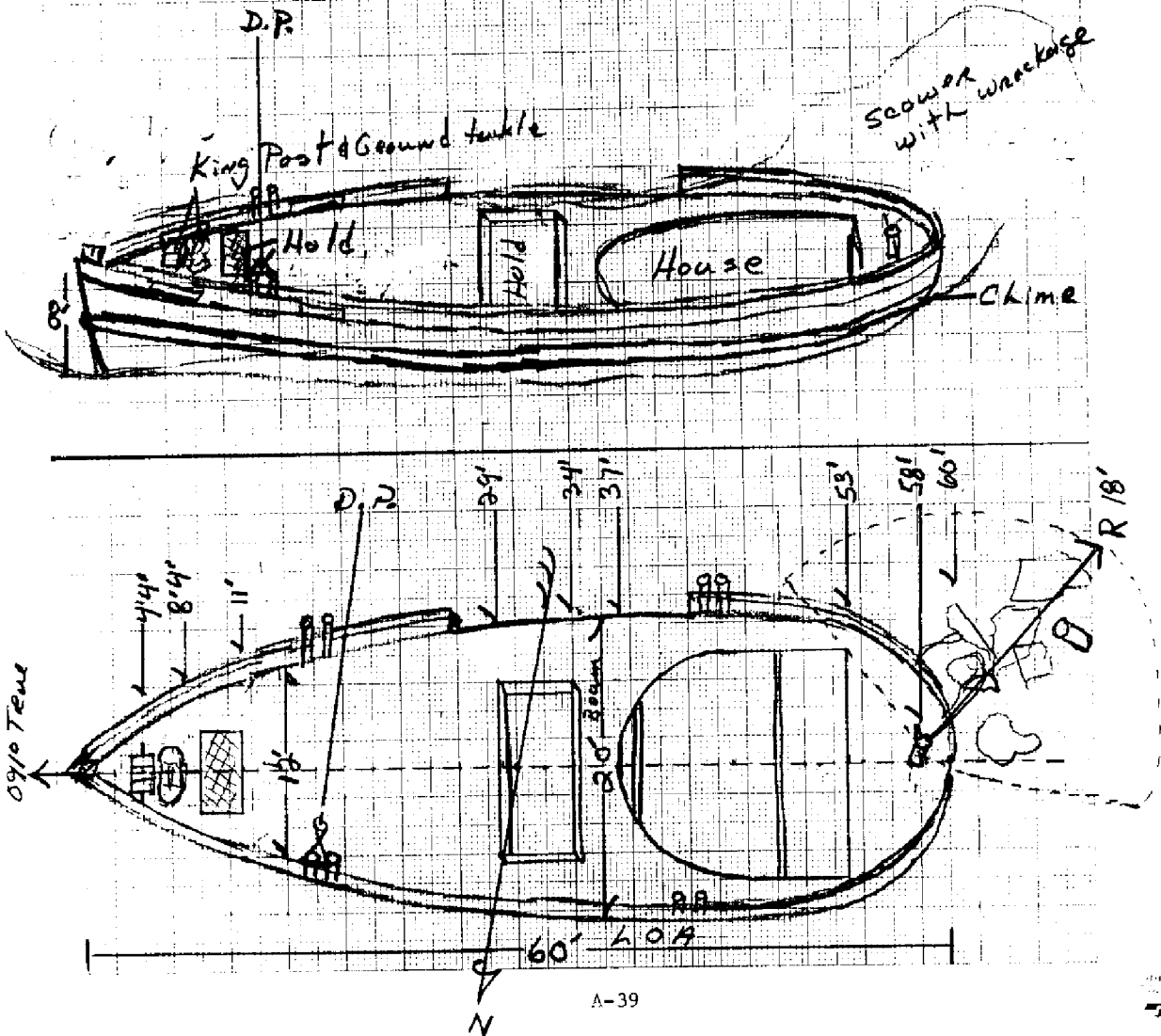
DRAWING OF ITEM

SEE ATTACHED DRAWING

DESCRIPTION OF ITEM

The item is a steel hull with wood deck
The hull is 60' LOA & 20' abeam. The
orientation is 100' from stern to bow.
The hull has a Stb. list and is slighl
down in the bow. The superstructure is
missing but makes up the debris on the
Stbd. quarter aft of the hull. The leas
depth was obtained on the Port amidships
bits.

AWOIS ITEM #3191
 LEAST DEPTH POSITION
 Latitude 37-13-29.93N
 Longitude 076-11-30.44W
 LEAST DEPTH corrected for predicted tides and pneumo
 33.5 feet MLLW
 ORIENTATION 091° true
 COMPOSITION Steel hull with wood deck
 Dimensions
 LOA 60 feet
 Beam 20 feet



H. LOCAL NOTICE TO MARINERS REPORT



**U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration**

NOAA SHIPS RUDE & HECK
439 West York St.
Norfolk, VA 23510

May 2, 1984

To: Commander, Fifth Coast Guard District
Federal Building
431 Crawford St.
Portsmouth, VA 23705

From: *Donald D. Winter*
LCDR Donald D. Winter
Commanding Officer

Subj: Notice to Mariners

Survey operations by the NOAA Ships RUDE and HECK in the vicinity of Buoy N "C43", which is SE of New Point Comfort Shoal, have identified wreckage, using NOAA divers, of a steel hulled 60' LOA, 20' Beam at latitude $37^{\circ}13'29.93''$ N; longitude $76^{\circ}11'30.44''$ W. Least depth over the wreck was 34.0 feet, using predicted tides. This position and least depth identifies and positions the wreck "Wk PA" currently charted at latitude $37^{\circ}14'00.0''$ N, longitude $76^{\circ}11'36.00''$ W.

Reference AWOIS Item 3191.

*Coastal sea helter
A-44*



CA-1

Cooperation letter
A-44



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NOAA SHIPS RUDE & HECK
439 West York St.
Norfolk, VA 23510

May 18, 1984

To: Commander, Fifth Coast Guard District
Federal Building
431 Crawford St.
Portsmouth, VA 23705

From: *Donald D. Winter*
LCDR Donald D. Winter
Commanding Officer

Subj: Notice to Mariners

The following is a correction to the attached Notice to Mariners submitted by this Command, dated May 2, 1984, with reference to the least depth determined over the wreck at latitude $37^{\circ}13'29.93''N$, longitude $76^{\circ}11'30''W$:

Change the least depth on the wreck from 34.0 feet to 33.5 feet MLLW, corrected for predicted tides.

This change is required due to the recomputation of the predicted tides.

Reference AWOIS Item 3191.



J. DANGERS TO NAVIGATION REPORT

NEGATIVE REPORT

DATE: 7/6/84

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Marine Center: Atlantic

OPR: E609

Hydrographic Sheet: RU/HE 10/1/84, FE-255

Locality: Chesapeake Bay

Time Period: April 17-27, 1984

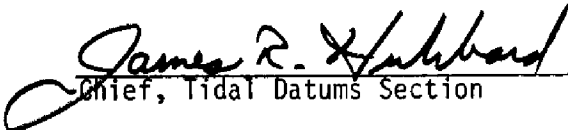
Tide Station Used: 863-8610, Hampton Roads, VA.

Plane of Reference (Mean Lower Low Water): 4.01 ft.

Height of Mean High Water Above Plane of Reference: 2.6 ft.

Remarks: Recommended Zoning:

For Awois item #3191 apply -10 minute time correction and x0.90 range ratio.


Chief, Tidal Datums Section

GEOGRAPHIC NAMES

FE-255

Name on Survey	Source of Name											No.
	A	B	C	D	E	F	G	H	K			
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	GRAND McNALLY ATLAS	U.S. LIGHT LIST				
CHEGAPEAKE BAY (title)												1
NEW POINT COMFORT SHOAL (title)												2
												3
VIRGINIA (title)												4
												5
												6
												7
												8
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												25

Approved:

Charles P. Harrison
Chief Geographer - n/cg2x5

JUL 30 1984

NOAA FORM 77-27		U.S. DEPARTMENT OF COMMERCE		REGISTRY NUMBER	
HYDROGRAPHIC SURVEY STATISTICS				FE-255	
RECORDS ACCOMPANYING SURVEY: To be completed when survey is processed.					
RECORD DESCRIPTION		AMOUNT		RECORD DESCRIPTION	
SMOOTH SHEET				SMOOTH OVERLAYS: POS, ARC, EXCESS	
DESCRIPTIVE REPORT		1		FIELD SHEETS AND OTHER OVERLAYS	
DESCRIP- TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR- GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS
ACCORDIAN FILES				2	
ENVELOPES			2		
VOLUMES	2				
CAHIERS	1				
BOXES					
SHORELINE DATA					
SHORELINE MAPS(List): N/A					
PHOTOBATHYMETRIC MAPS(List): N/A					
NOTES TO THE HYDROGRAPHER(List): N/A					
SPECIAL REPORTS(List): N/A					
NAUTICAL CHARTS(List): 1238					
OFFICE PROCESSING ACTIVITIES					
<i>The following statistics will be submitted with the cartographer's report on the survey</i>					
PROCESSING ACTIVITY			AMOUNTS		
			VERIFICATION	EVALUATION	TOTALS
POSITIONS ON SHEET					1
POSITIONS REVISED			0	0	0
SOUNDINGS REVISED			0	0	0
CONTROL STATIONS REVISED			0	0	0
			TIME - HOURS		
			VERIFICATION	EVALUATION	TOTALS
PRE-PROCESSING EXAMINATION			0	1	1
VERIFICATION OF CONTROL			0	1	1
VERIFICATION OF POSITIONS			0	1	1
VERIFICATION OF SOUNDINGS			0	1	1
VERIFICATION OF JUNCTIONS			0	0	0
APPLICATION OF PHOTOBATHYMETRY			0	0	0
SHORELINE APPLICATION/VERIFICATION			0	0	0
COMPILATION OF SMOOTH SHEET			0	2	2
COMPARISON WITH PRIOR SURVEYS AND CHARTS			0	1	1
EVALUATION OF SIDESCAN SONAR RECORDS			0	8	8
EVALUATION OF WIRE DRAGS AND SWEEPS			0	0	0
EVALUATION REPORT			0	4	4
OTHER			0	0	0
TOTALS			0	19	19
Pre-processing Examination by C.D. MEADOR AND R.D. SANOCKI			Beginning Date 7/30/84	Ending Date 7/30/84	
Verification of Field Data by C.D. MEADOR			Time(Hours) 5	Ending Date 8/3/84	
Verification Check by _____			Time(Hours) _____	Ending Date _____	
Evaluation and Analysis by C.D. MEADOR			Time(Hours) 13	Ending Date 8/3/84	
Inspection by AND VERIFICATION CHECK R.D. SANOCKI			Time(Hours) 2	Ending Date 8/3/84	

ATLANTIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO.: FE-255

FIELD NO.: R/H-10-01-84

Virginia, Chesapeake Bay, 3 miles SE of New Point Comfort Shoal

SURVEYED: April 17 through April 27 and May 23, 1984

SCALE: 1:20,000

PROJECT: OPR-E609-RU/HE-84

SOUNDING: Pneumatic Depth Gauge

CONTROL: Del Norte (Range/Range)

Chief of Party.....D. D. Winter

Surveyed by.....N. G. Millett
.....E. M. Clark
.....T. G. Callahan

Automated Plot by.....Xynetics 1201 Plotter (AMC)

1. INTRODUCTION

a. The $\frac{1}{2}$ mile required search radius for AWOIS items this far offshore may be inadequate when side-scan sonar alone is used for 400% disapproval coverage. It is recommended that the search radius be expanded to at least one mile for AWOIS items similar to this one.

b. No unusual problems were encountered during verification.

c. The field data for this field examination was collected at a scale of 1:10,000. It was processed during verification at a scale of 1:20,000 as required by section 7.3 of the Project Instructions.

c. Notes in the Descriptive Report were made in red during office processing.

2. CONTROL AND SHORELINE

a. The control is adequately described in sections F and G of the Descriptive Report.

b. There is no shoreline within the limits of this field examination.

3. HYDROGRAPHY

The only hydrography on this field examination is a single Pneumatic Depth Gauge least depth on a submerged wreck.

4. CONDITION OF SURVEY

The smooth sheet, hydrographic records and reports comply with the Hydrographic Manual except as follows:

a. When the field finds that a floating aid to navigation is not at its charted position, this information should be promptly reported to the nearest U.S. Coast Guard District as required by sections 1.6.5 and 5.9 of the Hydrographic Manual.

b. A corrector of +0.5 ft. was not applied to the Pneumatic Depth Gauge least depth.

c. The discussion in section Q of the Descriptive Report about problems with the DSF6000N echo sounder was very informative. The field unit is encouraged to continue with such discussions when necessary.

d. When echograms are submitted with the field work, the draft of the vessel's transducer should be documented in the Descriptive Report.

e. The Descriptive Report for this survey was extremely well written.

f. Very good and informative annotations were made on the sonargrams.

5. JUNCTIONS

This is an item investigation with no junctional requirements.

6. COMPARISON WITH PRIOR SURVEY

H-7750 1:40,000 1948-50

The discussion in section K of the Descriptive Report for the present field examination is adequate and needs no amplification in this Evaluation Report.

7. COMPARISON WITH CHART 12238 (26th Edition, February 12, 1983)

a. Hydrography

The source of the charted hydrography is Local Notice to Mariners (LNM) 37/82 and LNM 29/83.

The hydrographer's charting recommendation is found in section L of the Descriptive Report.

b. Aids to Navigation

There are no fixed or floating aids to navigation within the limits of the present survey.

8. COMPLIANCE WITH INSTRUCTIONS

Except as noted in section 4 of this Evaluation Report, this field examination adequately complies with the Project Instructions.

9. ADDITIONAL FIELD WORK

This is a good basic field examination. Since this submerged wreck is not considered dangerous to navigation, no additional field work is recommended.


Charles D. Meador

Charles D. Meador
Chief, Evaluation and Analysis Group
Verification of Field Data and
Evaluation and Analysis


Inspection Report
FE-255

The completed survey has been inspected with regard to survey coverage, development of critical depths, cartographic symbolization, and verification or disproof of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts of the survey have been made. The survey complies with National Ocean Service requirements except as noted in the Evaluation Report. The survey records comply with NOS requirements except where noted in the Evaluation Report.

Inspected

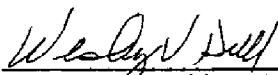


R. D. Sanocki
Chief, Hydrographic Surveys
Processing Section
Hydrographic Surveys Branch



David B. MacFarland, Jr., LCDR, NOAA
Chief, Hydrographic Surveys Branch

Approved August 6, 1984



Wesley V. Hull, RADM, NOAA
Director, Atlantic Marine Center

76° 12'

76° 11'

37° 14'

• *BW*
N "C43"

³³
Wk

37° 13'

FE-255 (1984) AWOIS ITEM NO. 3191
SOUNDING IN FEET AT MLLW
NORTH AMERICAN DATUM OF 1927
POLYCONIC PROJECTION
1:20,000 SCALE

76° 12'

76° 11'

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. FE-255

INSTRUCTIONS

- A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
 2. In "Remarks" column cross out words that do not apply.
 3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
12220	4/11/85	J. Bailey	Full Part Before After Verification Review Inspection Signed Via Drawing No. 51 EXAM. NO CORR.
12221	5-22-85	H. Radden	Full Part Before After Verification Review Inspection Signed Via Drawing No. 82 EXAMINED NO CORR
10221	10-1-85	E. Bedouin	Full Part Before After Verification Review Inspection Signed Via Prototype Drawing No. n/c
12238	3-25-88	H. Radden	Full Part Before After Verification Review Inspection Signed Via Drawing No. 40 NO CORR
12224	3-25-88	H. Radden	Full Part Before After Verification Review Inspection Signed Via Drawing No. 19 NO CORR
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
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