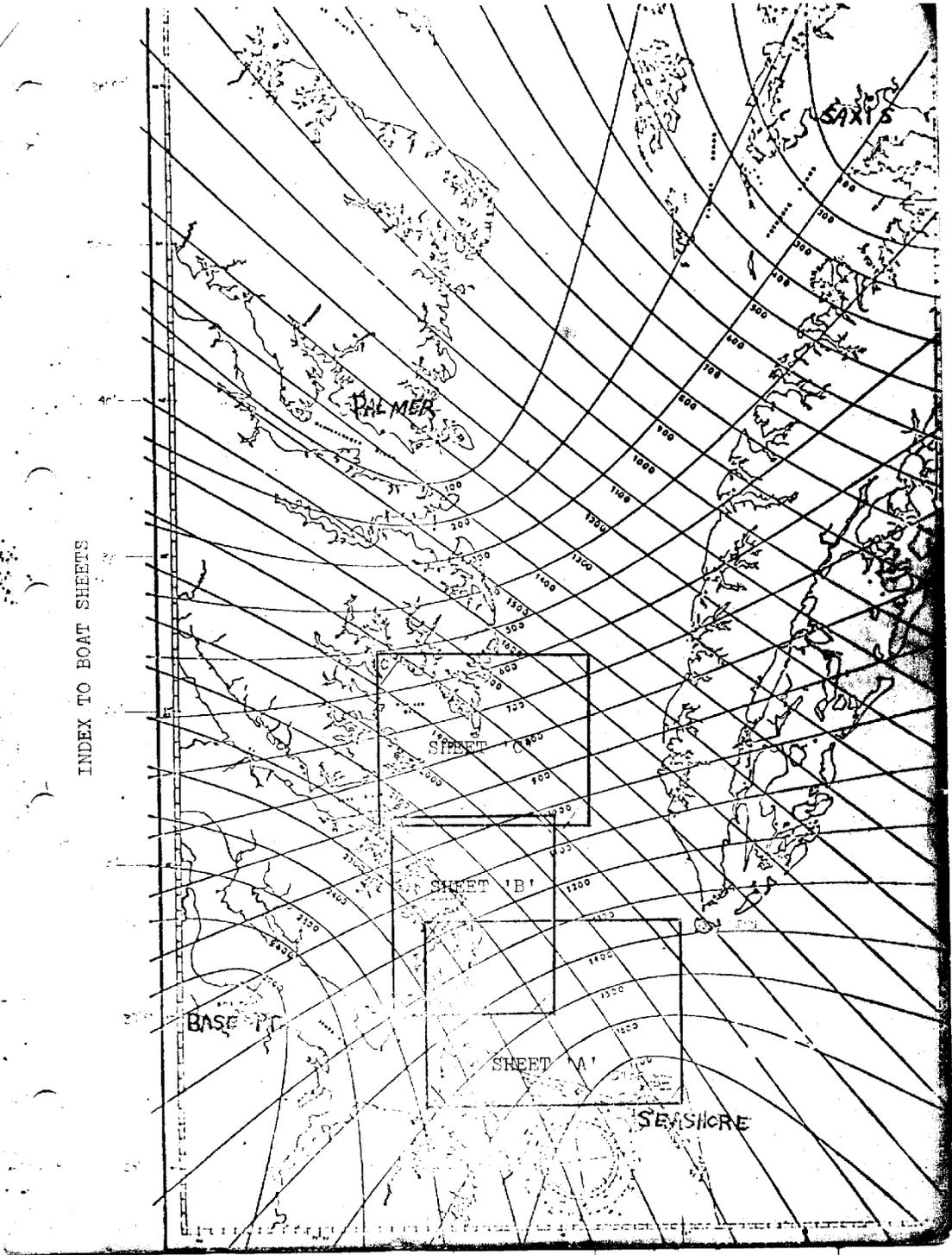


H09255WD

NOAA FORM 78-35A U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SERVICE
DESCRIPTIVE REPORT
Type of Survey <i>Wire Drag</i>
Field No. <i>R/H-20-1-71 & R/H-20-1-72</i>
Registry No. <i>H09255wd</i>
LOCALITY
State <i>Virginia</i>
General Locality <i>Chesapeake Bay</i>
Sublocality <i>Lynnhaven Roads, Crumps Bank,</i>
<i>Horshoe, Hampton Roads & South of Wolftrap</i>
..... <u>19 71-72</u>
CHIEF OF PARTY
..... <i>LCDR M.N. Walter, CDR J. Collins</i>
LIBRARY & ARCHIVES
DATE <i>March 14, 1984</i>

INDEX TO BOAT SHEETS



DESCRIPTIVE REPORT
TO ACCOMPANY
WIRE DRAG FIELD NO. RH-20-1-71
PROJECT OPR-467-RH-71
ITEM INVESTIGATION - CHESAPEAKE BAY
1971
LCDR MERRITT N. WALTER
NOAA SHIPS RUDE & HECK

- A. AUTHORITY - Project instructions, OPR-467-RH-71, wire drag investigations, Chesapeake Bay dated 28 January 1971; amendment to instructions dated 5 February 1971. ✓
- B. CHARACTER AND LIMITS OF THE WORK - The purpose of this project is to locate and clear reported wrecks and obstructions hazardous to navigation in Chesapeake Bay. The locality of the survey covered by C&GS Chart 1222 is the area from Wolf Trap Light House south to the Lynnhaven Channel and west from Cane Henry to LONG 76°21'W. The survey was conducted on a scale of 1:20,000. ✓
- C. CONTROL - Raydist Type "T" hyperbolic navigation system was utilized for control on all days except G day, M day, N day, W day, and Z day. Visual control was used on those days. ✓
A listing of all signals used is given in Attachment I.
- D. DATE OF SURVEY - Dragging for OPR-467-RH-71 began 10 February 1971 and was terminated 31 March 1971. ✓
- E. TIDAL REDUCERS - *Approved smooth tidal correctors were applied during verification.* Preliminary reduction of each days data was made using predicted tides for the standard tide gauge at Hampton Roads, Virginia from Eastern Standard Time. Actual tidal data was furnished by the Rockville office from the standard tide gauge at Hampton Roads, Virginia. ✓
A listing of the tide corrections applied to tide data for each item investigated is given in Attachment II.
- F. SPLITS - *See the Evaluation Report - section 6.a.* No splits occurred within the designated search areas. ✓
- G. GROUNDINGS AND HANGS - *See the Evaluation Report - section 5.a.* See Attachment IV, List of Groundings and Hangs. ✓
- H. GENERAL NOTES - Morning and evening Raydist calibrations at Little Creek, Virginia were made by running the range of Little Creek NAB Lookout Tower - Little Creek Outer Jetty Light and turning the right angle to Radio Transmitting Tower. Calibrations at York Spit Light House were made by circling the light house so as to position the ship at known bearings where it would cross the raydist arcs passing ✓

APPROVAL SHEET

All records of this survey prior to smooth plotting are hereby approved. The OPR-467-RH-71 field work was personally supervised by the undersigned and the boat sheet and records were inspected daily. This survey with respect to Items #56, #54, #9, F, #64A, #55, #54D, #25, and #23 is considered complete and adequate for charting. Additional field work is recommended for Item #13.

Merritt N. Walter
Merritt N. Walter
LCDR NOAA

TABLE OF ATTACHMENTS

- I CONTROL SIGNALS
- II TIDAL NOTE (*Field*)
- III FLOATING AIDS TO NAVIGATION
- IV GROUNDINGS AND HANGS
- V ITEM INVESTIGATIONS
- VI STATISTICS

See the Automated Control Listing included in
 the survey records for all control information
 for H-9255 WD.

ATTACHMENT I

CONTROL SIGNALS

1971

NAME	Sta. No.	STATION	SOURCE	YEAR
REEK	001	Little Creek	G-4267	1929
LOOK	002	Little Creek NAB Lookout Tower	G-10989	1955
RADI	003	Radio Transmitting Tower	G-5694	1941
MAST	004	Cape Henry Weather Bureau Signal Mast	G-4267	1939
COVE	005	Little Creek NAB Desert Cove Water Tank	G-10989	1955
CASE	006	Casemate USE	G-4267	1939
CAPE	007	Cape Henry Light House (New)	G-1550	1888
TANK	008	Little Creek Naval Amphibase Tank	G-9548	1952
THIM	009	Thimble Shoal Light House	G-2706	1935 1919
HAMP	010	Hampton Radio ^{STATION} WVEC MAST	G-12096	1968 1958
HILL	011	Fox Hill Municipal Water Tank	G-4279	1939
FORT	012	Fort Monroe Tank	G-1550	1932 1929
PHEO	013	Pheobus Water Works Tank	G-3566	1938
YORK	014	York Spit Light House	G-1895	1900
WOOL	015	Fort Wool Tall Tower	G-5751	1943
CLOCK	016	Virginia Building Spire	G-1550	1913
NAVY	017	Naval Operations ^{STATION} Base Tank	G-7274	1947
LITE	018	Newport News Middle Ground Light House	G-1550	1903
SUB	019	SUB	G-5751	1943
DOK	020	DOK	G-5751	1943
GRAIN	021	Grain Elevator USE	G-1550	1932

CONTROL SIGNALS

1971

NAME	Sta. No.	STATION	LATITUDE	LONGITUDE
POLE	052	West Overhead Power Pole Lynnhaven Inlet Bridge (from original "T" Sheet) }	36°54'25.955"N	76°05'35.659"W
TUB	033	Chesapeake Bridge Trestle "B" established by AMC personnel in 1967 }	36°58'50.7"N	76°06'24.7"W
PIER	034	Northwest Corner of Naval Pier #7 established as photogrammetric signal from C&GS Chart 400 }	36°57'07"N	76°19'58"W
PALM	100	PALMER Raydist Station established by AMC personnel 1971 }	37°37'18.10"N	76°19'32.18"W
SAXS	101	SAXIS Raydist station established by AMC Personnel 1971 }	37°55'09.96"N	75°43'41.94"W
BASE	102	BASE PT Raydist Station established by AMC Personnel 1971 }	37°01'46.06"N	76°35'21.96"W
SEAS	103	SEASHORE Raydist Station established by AMC Personnel 1971 }	36°54'48.35"N	76°03'11.97"W

Cannot be verified - the file referencing this station does not contain sufficient data to ascertain a G.P.

* Cannot be verified - no data exists in any AMC files on this station.

thru the position of the light house. All other calibrations were made by three point fixes which were plotted directly on the boat sheet. On Z day the HECK took a series of calibrations from Little Creek to Smith Point to establish a calibration record for Hastings Baydist. These calibrations were for fulfilment of the equipment rental contract with Hastings and are not related to the wire drag work done prior to Z day. -- See the Project OPP-467 Calibration Report included in the survey records.

- I. CURRENTS - Drag strips planned with the use of C&GS tidal current tables often gave unsatisfactory results. This was particularly true on the northern part of the project. No attempt was made to correlate the apparent discrepancies with any known phenomena because of the limited time spent working in the area.
- J. DISCREPANCIES AND COMPARISON WITH PREVIOUS SURVEY AND CHARTS - See Attachment V, Item Investigations. -- See the Evaluation Report - sections 4. & 5.

- K. PERSONNEL AND EQUIPMENT - During the OPP-467-RH-71 project the Ships RUDE & HECK acted as guide and end vessels respectively. The RUDE & HECK launches equipped with DE-723 fathometers were alternated as the drag tender. During calm weather the RUDE or HECK skiff was used to tend the drag. At times both a launch and skiff were used to tend the drag. Reconnaissance hydrography was done by both ships strictly for the purpose of figuring upright settings. This hydrography should not be used for charting. Cuts to the end buoy and opposite vessels were made by gyro repeaters. The ream. hydro. was not plotted as no draft, velocity, or settlement & squat correctors were determined.
- The distance from the mast to the end buoy was 265 meters when an 800 ft. towline was used.

On C day and M day when Items 54D and E, respectively, were investigated the RUDE & HECK launches were used to pull the drag and a skiff was used to tend the drag. This was necessary because of the shoal waters and close quarters in which these items were located. -- These were uncontrolled drags & are not smooth plotted. Item 54D was resolved by a least depth and D.B. on the wreck. Item E is adequately disposed of in the narrative for this item in this Descriptive Report.

On V day Strip 3 the RUDE used a 700 ft. towline, and the distance from the mast to the end buoy was 234 meters. Standard wire drag equipment was used throughout the survey. Maximum length of drag used was 6600 ft. while 600 ft. was the minimum.

Officers on board during OPP-467-RH-71 work were: LCDR M.M. Walter, LT G.P. Schaefer, LTJG A.Y. Bryson, LTJG J.J. Morley, and ENS N.M. Fthridge.

- L. MISCELLANEOUS - A smooth sheet will be prepared by one of the ships officers working in the Norfolk processing office. *The data was processed and the smooth sheet compiled by the Evaluation and Analysis Group, AMC.* 1969 field work on Item #13 was claimed and the 1971 work was planned around the previous survey. Therefore, when smooth plotting Item #13 both 1969 and 1971 survey data should be used. *An adequate junction has been effected with FE-233 WD (1969).*

Normally, position approximate and position doubtful wrecks are investigated with a one mile radius search; however, after discussion with the operations division of the Atlantic Marine Center, it was agreed that the one mile radius search could be reduced to a 1/2 mile radius search by the discretion of the Commanding Officer when local aids to navigation or other physical features obviously limited the assumed position to a radius of less than one mile.

During the duration of OPP-467-RH-71, 65 dives were made to investigate hangs and groundings. Experience with diving proves that much ship time can be saved by the judicious use of a thorough diver investigation of the obstruction. It is recommended that all future project instructions require a diver investigation of all hangs, other than temporary groundings or anticipated groundings in shoal water, before attempting to clear with subsequent drag strips. Lead line soundings should be obtained, if practicable, in order to determine the drag depth for clearance.

- M. RECOMMENDATIONS - This survey is considered adequate with respect to the wire drag requested for Items #56, #54, #9, E, #64A, #55, #54D, #25, and #23. Item #13 was not located, however, not all area within the search perimeter has been dragged. *Additional wire drag is recommended on Item #13. Additional work was accomplished in the 1972 portion of this survey.* Submitted by,

Max M. Ethridge

Max M. Ethridge
ENS NOAA

TIDAL NOTE (*Field*)

Hourly tide heights were supplied by the Washington Office, (Chief, Tides Section), for Hampton Roads, Virginia, time meridian 75°W. Height is 3.9 ft. below mean low water.

Tide data for all strips was corrected per recommendations by the Washington Office. Those recommendations are as follows:

GENERAL AREA	TIME DIFFERENCE		HEIGHT DIFFERENCE	
	high	low	high	low
Item #56	-0h 25m	-0h 40m	+0.1	0.0
Item #54	-0h 35m	-0h 50m	+0.1	0.0
Item # 9	-0h 15m	-0h 40m	0.0	0.0
Item #25	-0h 10m	-0h 05m	-0.2	0.0
Item #23	-0h 10m	-0h 05m	-0.2	0.0
Item F	+0h 14m	+0h 10m	+0.3	0.0
Item #64A	0h 00m	0h 00m	0.0	0.0
Item #55	-0h 50m	-1h 10m	+0.4	0.0
Item #13	-0h 50m	-1h 10m	+0.3	0.0
Item #54D	-0h 13m	+0h 01m	-0.5	0.0

FLOATING AIDS TO NAVIGATION

Buoy MO(A) 'LC'

DATE LOCATED: 16 February 1971
LAT - LONG : 36°56'58"N 76°10'48"W
GENERAL DEPTH: 19 feet

Mun Buoy 'C13'

DATE LOCATED : 11 February 1971
LAT - LONG : 36°58'08"N 76°10'35"W
GENERAL DEPTH: 18 feet

Buoy PM N 'C7'

DATE LOCATED : 19 February 1971
LAT - LONG : 36°55'40"N 76°06'09"W
GENERAL DEPTH: 24 feet

Wreck Buoy 'WR7'

DATE LOCATED : 11 March 1971
LAT - LONG : 37°00'49"N 76°03'09"W
GENERAL DEPTH: 39 feet

Navy Buoy

*Date located: 24 March 1971
Latitude: 36°56'39.6"
Longitude: 76°03'16.6"
Charted depth: 36 feet*

For correct position and depth information see section 5. a. of the Evaluation Report.

DAY LETTER	LATITUDE	LONGITUDE	GROUND EFF. DEPTH	CLEAR BY STRIP	CLEARED FPP. DEPTH	SOUNDING	CHARTED DEPTH	ITEM Tabulation No. & Remarks
21A	36°56'59"	76°10'45"	16'	C-1	19'	18'	21'	56A #45 See Item #45 engine investigation De-attached with anchor description
11B	36°58'08"	76°10'35"	NONE	NONE	NONE	NONE	NONE	NONE #45 Wrapped Nav. buoy "C13" #42 Tri-pod shaped iron piping
37B	NONE	NONE	NONE	NONE	NONE	NONE	NONE	56B #42 Obst. Removed
7C	36°56'58"	76°10'48"	NONE	NONE	NONE	NONE	NONE	NONE #46 Wrapped MO(A) "LC"
17C	36°57'05"	76°11'45"	NONE	A1	19'	NONE	NONE	NONE #47 Steel Section Approx. 1' off bottom
30C	36°57'42"	76°10'37"	NONE	D2	18'	19'	21'	56C #44 2'X2'X2' Cement Clump
34C 11D	36°56'58"	76°10'48"	NONE	NONE	NONE	NONE	NONE	NONE #46 #41 steel Accumulation Ladder- MO(A) "LC"
43D	36°57'18"	76°09'12"	18'	NONE	15'	17.5'	20'	56D #39 Sections of R/R Track previously Charted Obs.
12E	36°55'58"	76°05'05"	24'	NONE	NONE	NONE	26'	54A #21 Anchor 2' off bottom
60E 28F	36°56'04"	76°06'57"	NONE	NONE	NONE	24'	26'	#27 Hang on bottom #29 Removed Anchor
29F	36°55'52"	76°06'42"	NONE	NONE	NONE	NONE	26'	54C #28 Hang Old Wreck (Steel)

10.
See the Evaluation Report - Section 5. a.

See the Evaluation Report - section 5. a.

ATTACHMENT IV (cont'd)

POSITION AND DAY LETTER	GROUND EFF.		CLEAR BY	CLEARED DEPTH	SOUNDING	CHARTED DEPTH	ITEM NO.	REMARKS
	LONGITUDE	DEPTH						
17F	36°55'49"	76°06'09"	NONE	NONE	NONE	NONE	NONE	26 Wrapped Nav. Buoy "C-7"
27P	36°55'49"	76°06'09"	NONE	NONE	NONE	NONE	NONE	26 Wrapped Nav. Buoy "C-7"
18H	37°02'28"	76°14'28"	J-2	11'	12'	15'	9	23 wk of an armed sailing vessel 25 Item 9 DRUID HILL See Item Investigator
6J	37°02'28"	76°14'28"	J-2	11'	12'	15'	9	22 Item 9-DRUID HILL
31K	37°18'40"	76°11'15"	NONE	NONE	36'	30'	25	50 Hung at N Buoy BARGE BERTIE
31K	37°18'57"	76°10'08"	NONE	NONE	NONE	35'	25A	48 Anchor PTW 9-10 150' from 9
46K	37°16'21"	76°11'32"	NONE	NONE	36'	30'	23A	51 Barge with pontoon attached Concrete Block 8' From Bottom
15L	37°16'35"	76°10'48"	NONE	NONE	30'	43'	23	49 Steel Cylinder 6' Dia. 40' Long.
41N	36°57'47"	76°20'22"	N-2	36'	NONE	NONE	64A	37 Dredge Mooring Buoy Obs. Removed
27N	36°57'37"	76°20'24"	NONE	NONE	42'	NONE	64A	38 ^{Investigated hung} Hung off mooring cable lying on bottom
10P	37°00'48"	76°03'11"	NONE	NONE	32'	43'	55	- Wooden Ship - Data not processed.

See the Evaluation Report - section 5.a.

See the Evaluation Report - section 5.a.

According to the survey records, this hang was not investigated - no dives were made according to the test records of the volume. This hang extends 6-7 ft off the bottom of a mooring cable lying on the bottom and not protrude 6-7 ft. Therefore this is plotted as an uninvestigated uncleaned hang.

ATTACHMENT IV (cont'd)

For correct position and depth information see section 5.a. of the Evaluation Report.

POSITION AND DAY LETTER	LATITUDE	LONGITUDE	GROUND EPP. DEPTH	CLEAR BY STRIP	CLEARED EPP. DEPTH	SOUNDING	CHARTED DEPTH	ITEM NO. & REMARKS
110	37°00'48"	76°03'11"	33'	NONE	NONE	31'	43'	55 - Wooden Ship-Data not processed
15R 24P	36°56'56"	76°03'28"	39'	1969	39'	NONE	40'	47 Old anchor - extends 2 ft. off bottom NONE - Uninvestigated Hang
88	36°57'38"	76°05'22"	34'	1969 Work	35'	31'	37'	13A 1/2 Iron Pipe 8' Off (See Item Investigation)
14S	36°57'48"	76°04'41"	NONE	NONE	NONE	33'	30'	13P 1/4 Anchor Shank 5' Off the Bottom. 4 ft. off bottom.
1969	36°57'44"	76°05'42"	35'	S1	34'	NONE	37'	130 - Previous Cleared 35'
1969	36°57'37"	76°05'08"	NONE	1969 Work	35'	NONE	38'	13D - Charted 32'
1969	36°57'32"	76°04'32"	NONE	1969 Work	35'	NONE	39'	13E - Charted 31'
20T 20T	36°57'18"	76°03'48"	36'	1969 Work	39'	36'	40'	13P 1/4 Metal Clump (Aluminum) (See Item Investigation)
1969	36°57'03"	76°03'41"	39'	U1	36'	NONE	41'	13G - 1969 Hang See Item Investigation
43U 26V-33V	36°56'25"	76°03'10"	38'	NONE	NONE	NONE	35'	NONE - Uninvestigated Temporary Hang
33V	36°56'43"	76°03'09"	38'	NONE	NONE	37 Path.	40'	NONE - Grounding - not in conflict with charted depths
1X-5X	36°56'35"	76°03'26"	35'	U2	32'	NONE	34'	NONE - 2 Cement Clump Mooring Buoy Anchor Leg NONE - Grounding In Prev. Cleared 32' - Grounding not in conflict with charted survey depths.

See the Evaluation Report - section 5.a.

See the Evaluation Report - section 5.a.

For correct position and depth information see section 5.a. of the Evaluation Report.

POSITION AND DAYLETTER	LATITUDE	LONGITUDE	GROUND EFF. DEPTH	CLEAR BY STRIP	CLEARED EFF. DEPTH	SOUNDING	CHARTED DEPTH	ITEM Tabulation NO. #	REMARKS
5X	36°56'41"	76°03'17"	NONE	NONE	NONE	NONE	NONE	NONE #6	Wrapped Navy Marker Buoy
11X	36°57'05"	76°05'41"	NONE	Y1	19'	NONE	27'	NONE #25	12" Dia. Pipe 4 1/2" Off Bottom
39U-42U	36°57'07"	76°05'33"	30'	Y1	19'	NONE	29'	NONE	- Grounding - Not in conflict with charted/sounding hydrography.

See the Evaluation Report - section 5. a.

See the Evaluation Report - section 5. a.

ITEM INVESTIGATION

ITEM #56

The sunken wreck of a 22 foot cabin cruiser burned to the water line and sunk position approximate charted at 36°57.30'N, 76°10.78'W was investigated with a 1/2 mile radius search, however, the wreck was not located. Conversation with a local resident, Mr. Lewkitis of Pretty Lake Avenue, Norfolk, Va., (known personally by the commanding officer), who witnessed the burning and sinking of the 22 foot vessel revealed the boat was so completely burned that the remains would hardly constitute a hazard to navigation. Mr. Lewkitis also confirmed that the vessel definitely sank between buoy MO(A)"LC" and buoy "C13", consequently, the search was limited to that area with the verbal concurrence of operations division, Atlantic Marine Center. ✓

Recommend the wreck be removed from the charts. -- Do not concur --
See the Evaluation Report - section 5.a.

ITEM #56A

While dragging for Item #56 on A DAY, 10 February 1971, the sunken wreckage of a twin engine aircraft was located at 36°58'59"N, 76°10'48"W with a least depth of 18 feet MLW by divers lead line. The aircraft wreckage was later removed by the Little Creek Harbor Clearance Unit and identified as that of a PB-24 which crashed off of Little Creek in 1942. ✓ Little Creek Harbor Clearance considered the area clear and terminated their search for debris on 8 March 1971. (See copy of Harbor Clearance Unit Two report filed with A DAY strips and calibrations). ✓

Recommend the wreckage not be charted. - Concur - See hang #45 in the tabulation in section 5.a. in the Evaluation Report.

ITEM #56B

While dragging for Item #56 on B DAY, 11 February 1971 a steel accommodation ladder 30 ft. long by 3 ft. wide extending 2 ft. off the bottom was located. The obstruction was recovered and disposed of ashore by wire drag party. - See hang #41 in the tabulation in section 5.a. of the Evaluation Report. ✓ ✓

ITEM #56C

While conducting wire drag operations on C DAY 12 February 1971 a 2 ft. by 2 ft. by 2 ft. concrete clump was located at $36^{\circ}57'42''\text{N}$, $76^{\circ}10'38''\text{W}$ with a least depth of 19 ft. MLW by divers lead line. ✓

Recommend the concrete block be charted as a 19 ft. sounding at $36^{\circ}57'42''\text{N}$, $76^{\circ}10'38''\text{W}$. — Concur — see *log #44* in the tabulation in section 5.a. in the Evaluation Report.

ITEM #56D

While conducting wire drag operations on D DAY 16 February 1971 a previously charted obstruction consisting of railroad rails was located at $36^{\circ}57'18''\text{N}$, $76^{\circ}09'48''\text{W}$ with a least depth of 178 ft. MLW by divers lead line. Present charts show the obstruction located at $36^{\circ}57'19''\text{N}$, $76^{\circ}09'48''\text{W}$ and cleared to 15 ft. MLW. Recommend the obstruction now be charted at $36^{\circ}57'18''\text{N}$, $76^{\circ}09'48''\text{W}$ with a known least depth of 178 ft. MLW. ✓

See log #39 in the tabulation in section 5.a. in the Evaluation Report.

Sections 4. and 8. of the Evaluation Report refer to the charted obstruction which originated from H-7177 WD (1947-48).

ITEM #54

The sunken wreck of a 24 foot boat position approximate charted at $36^{\circ}56.25'N$, $76^{\circ}06.31'W$ was investigated with a 1/2 mile radius search, however, the wreck was not located. ✓

Recommend the wreck be removed from the charts. --Do not concur -- see section 5.a. of the Evaluation Report.

ITEM #54A

While conducting wire drag operations in search of Item #54 on E DAY, 18 February 1971, an old fashioned ship's anchor was located at $36^{\circ}55'58''N$, $76^{\circ}05'08''W$. Divers reported that the obstruction extended two feet above the general bottom. Because of current conditions, a least depth could not be obtained by lead line. General bottom in the area of the anchor is 26 ft. MLW. ✓

Recommend the anchor be charted ^(not cleared & no least depth) as a 24 ft. sounding at $36^{\circ}55'58''N$, $76^{\circ}05'08''W$. -- See Item #21 in the tabulation in section 5.a. of the Evaluation Report.

ITEM #54B

On 19 February 1971 an old fashioned ship's anchor 8 feet in length was located at $36^{\circ}56'08''N$, $76^{\circ}06'58''W$. The obstruction was removed and deposited at the Atlantic Marine Center. -- See Item #29 in the tabulation in section 5.a. of the Evaluation Report. ✓

ITEM #54C

On 19 February 1971, an unidentified and uncharted wreck of a steel vessel was located at $36^{\circ}55'58''N$, $76^{\circ}06'48''W$. The disposition and state of deterioration of this wreck is such that its identification as a vessel is questionable. It presents no danger to navigation. ✓

Recommend the wreck not be charted. --Do not concur -- The possibility exists that this is item 54 -- see Item #28 in the tabulation in Section 5.a. of the Evaluation Report.

ITEM #54D

This item was assigned thru the Atlantic Marine Center from the Army Corps of Engineers after several vessels had reported striking a submerged obstruction in the channel entrance to Lynnhaven, Virginia. The obstruction was located on 22 February 1971 at $36^{\circ}54'48''N$, $76^{\circ}05'28''W$ with a least depth of 16 ft. MLW by divers lead line. The obstruction was identified as the wreck of an armed sailing vessel. ✓

Recommend the wreck be charted at $36^{\circ}54'48''N$, $76^{\circ}05'28''W$ with a known least depth of 16 ft. MLW. -- See Item #23 in the tabulation in section 5.a. of the Evaluation Report.

ITEM #9

The sunken wreck of the cargo ship DRUID HILL charted at 37°02.00'N, 76°13.97'W was investigated with a one half mile radius search. The wreckage was located on 24 February 1971 at 37°02'28"N, 76°14'28"W with a least depth of 12 ft. MLW by divers lead line.

Because of the extensive diver investigation the wreck was cleared in one direction only. The clearing strip was run on 25 February 1971 with an effective depth of 11 ft. MLW.

Recommend the wreck now be charted at 37°02'28"N, 76°14'28"W with a cleared depth of 11 ft. MLW. - See hang #52 in the tabulation in section 5.a. of the Evaluation Report.

NOTE: On H DAY, Strip #2, 24 February 1971, the DRUID HILL was hung at an effective depth of 10 ft. MLW, but on 25 February 1971, J DAY, Strip #2 the wreck was cleared to 11 ft. MLW. The discrepancy on H DAY was due to lift. The controlling lift on H DAY strip #2 was 3.5 feet obtained in the section between buoy 1 and buoy 2. The wreck was hung between N buoy and 1 buoy, but no test was made in the N-1 section. It is possible that the lift in the N-1 section was less than the 3.5 foot lift recorded in the 1-2 section. If this was the case, the smaller value of lift between N and 1 would mean that the effective depth between N and 1 was greater than 10 feet MLW. Therefore, the 11 foot effective on J DAY strip #2 seems reasonable in conjunction with the 12 foot sounding..

This was resolved during processing by application of smooth tides and verified Lift values.

The wreck has a charted depth of 2 ft - Chart 12 No.

ITEM #25

The sunken wreck of the barge BERTIE loaded with steel charted at $37^{\circ}18'66''N$, $76^{\circ}11'30''W$ was located on K DAY, 1 March 1971 at $37^{\circ}18'40''N$, $76^{\circ}11'18''W$ with a least depth of 305 ft. MLW by divers lead line. ✓

Recommend the wreck now be charted at $37^{\circ}18'40''N$, $76^{\circ}11'18''W$ with a known least depth of 305 ft. MLW. — See *hang #50 in the tabulation in section 5.a. of the Evaluation Report.*

ITEM #25A

On K DAY, 1 March 1971, a ship's anchor was located at $37^{\circ}18'57''N$, $76^{\circ}10'08''W$. The anchor extended three feet above the general bottom. While picking up the drag the ship HECK moved the anchor considerably, and its exact location is not know. Fishermen conducting trawling operations in the area reported snagging the anchor and dragging it along the bottom on several occasions. ✓

Recommend anchor not be charted since no one position is valid for any given length of time. — See *hang #48 in the tabulation in section 5.a. of the Evaluation Report.*

ATTACHMENT V
(continued)

In the dive reports & volumes this hang is a 6 ft. diameter steel cylinder 40 ft. long with numerous angle iron protrusions. See hang #49 in the tabulation in section 5.a. of the Evaluation Report.

ITEM #23

The sunken wreck of a barge with pontoon attached, position doubtful, charted at $37^{\circ}15.75'N$, $76^{\circ}11.19'W$ was located on L DAY, 2 March 1971 at $37^{\circ}16'38''N$, $76^{\circ}10'48''W$ with a least depth of 30 ft. MLW at the hatch on top of the pontoon as verified by divers.

Recommend the wreck now be charted at $37^{\circ}16'38''N$, $76^{\circ}10'48''W$ with a known least depth of 30 ft. MLW.

ITEM #23A

While dragging on K DAY, 1 March 1971, a 8 ft. by 8 ft. flat topped concrete block was located at $37^{\circ}16'28''N$, $76^{\circ}11'32''W$ with a least depth of 36 ft. MLW by ship's fathometer. The clump extended 8 ft. above the bottom, however, divers reported scouring around the clump which accounts for the least depth of 36 ft. in waters generally 39 ft. to 40 ft. deep.

Recommend the clump be charted at $37^{\circ}16'28''N$, $76^{\circ}11'32''W$ as a 36 ft. MLW sounding.

In the dive reports & volumes this obstruction is the barge with pontoon attached. There is no hang of an 8' x 8' x 8' on any strip of this survey. See hang #51 in the tabulation in section 5.a. of the Evaluation Report.

ITEM E

The sunken wreck of a 36 ft. boat charted at 36°51'08.6"N, 76°18'06.5"W, (6 feet off the southwest corner of the Atlantic City Warehouse Corp pier) was investigated on M DAY, 5 March 1971 with divers and wire drag, however, the wreck was not located. Pre-drag reconnaissance with local residents indicated no reports of vessels striking the wreck when using the pier. Mr. Frank Vanek recalled that the boat was tied next to the dock at night, but when he returned the following morning it was gone. It was assumed that the boat had sunk at the dock, however, Mr. Vanek knew of no investigation to verify the sinking.

Recommend that the wreck be removed from the charts.--Concur

The wire drag work done on this item was uncontrolled and therefore cannot be plotted. The tender tender Volume (M-Day, March 5) describes the coverage obtained during this investigation by both divers and wire drag which is considered sufficient to disprove the existence of a wreck.

ITEM #64A

Item 64A was assigned on 9 March 1971 by AMC after reports of a 16 ft. draft vessel striking a submerged obstruction at 36°57'49"N, 76°20'23"W were received. The obstruction was hung at 36°57'47"N, 76°20'22"W. Divers identified the obstruction as a 3 ft. diameter sphere, crushed in on one side, attached to the bottom and used as a mooring buoy. The Great Lakes Dock and Dredge Company, who were working in the vicinity, claimed ownership of the buoy and removed it with a stiff leg crane. The area was redragged to 36 ft. and the existence of any other obstruction was disproved. -- *The clearing strip*

Recommend no obstruction be charted. *ended in a hang, which was not investigated and was not cleared. See hangs #57 & 58 in the tabulation in section 5.a. of the Evaluation Report.*

36°57'38" } hang at 36'
76°20'25" } not cleared
 } not investigated

chart - 36057

2/10/75
JK

ITEM #55

The sunken wreck of a 110 ft. derelict vessel charted at 37°00.77'N, 76°03.20'W was located on P DAY, 10 March 1971 at 37°00'48"N, 76°03'11"W with a least depth of 31 ft. MLW by divers lead line. The existence of this wreck is known and its general location is marked by buoy "WR7".

Recommend the wreck now be charted at 37°00'48"N, 76°03'11"W with a known least depth of 31 ft. MLW.

*Data not smooth plotted - wreck removed -
Local Notice to Mariners No. 6 of 1973
(2/6/76)*

ITEM #13

The sunken wreck of the fishing vessel, MINNIE V, position doubtful, charted at 36°57.27'N, 76°04.03'W was investigated with a 1/2 mile radius search, however, the wreck was not located. Field operations on OPR-467-RH-71 were terminated prior to completion of the one mile radius search for this item.

Recommend additional wire drag be done on this item.

Also recommend the charts continue to show the position doubtful charted at 36°57.27'N, 76°04.03'W. — See section 5.a. of the Evaluation Report.

ITEM #13A

On S DAY, 16 March 1971, a one foot diameter steel pipe extending 8 ft. off the bottom was located at 36°57'38"N, 76°05'22"W with a least depth of 31' ft. MLW by divers lead line. ~~This area was cleared to 35 ft. MLW by 1969 wire drag party, however, it was overlapped only 250 ft. The 1969 35 foot effective depth is disregarded. FE-233 WD (1969) did not cover this hang.~~

Recommend the pipe be charted as a 31' ft. MLW sounding. — See hang #22 in the tabulation in section 5.a. of the Evaluation Report.

ITEM #13B

On S DAY, 16 March 1971, an old fashioned anchor measuring 9 ft. along the stock and having a 1 ft. diameter shank was located in the South Auxiliary Channel at 36°57'48"N, 76°04'41"W with a least depth of 33 ft. MLW by divers lead line. Although this item extends 5 ft. off the bottom, its least depth is greater than the channel project depth.

Identified in the volume & other records as an iron pipe, 1 ft. in diameter, extending 4 ft. off bottom.
Since no soundings are shown in the channel, it is recommended that the anchor not be charted. — Do not concur — See hang #19 in the tabulation in section 5.a. in the Evaluation Report.

ITEM #13C

At 36°57'44"N, 76°05'^{18.2W}~~42~~"W is an unidentified hang at ³⁴35 ft. MLW from the 1969 work of the wire drag party. This hang was cleared to ~~34~~33 ft. MLW on S DAY, 16 March 1971. Recommend this hang be charted as an obstruction at 36°57'44"N, 76°05'^{18.2W}~~42~~"W with a cleared depth of ~~34~~30 ft. MLW. — See the tabulation in section 5.a. of the Evaluation Report.

18.2W
18.2W
telecon with M Hickson
confirmed hang for
item 13C. at new 4P.
6-1-84

ITEM #13D

At 36°57'37"N, 76°05'08"W is a charted obstruction cleared by wire drag to 32 ft. MLW. This item was cleared to 35 ft. MLW in an east to west direction by the 1969 wire drag party, and to 34 ft. MLW in a west to east direction this season. ✓

Recommend this obstruction be shown cleared to ^{4 35' E to W} 34³⁵ ft. MLW.
Source: H-7177 WD (1947-48) - See section 4.b. of the Evaluation Report. 4.c. 3) b)

ITEM #13E

At 36°57'32"N, 76°04'32"W is a charted obstruction cleared by wire drag to 31 ft. This item was cleared to 35 ft. MLW in an east to west direction by the 1969 wire drag party and to 34 ft. MLW in a west to east direction this season. ✓

Recommend the obstruction be shown cleared to ^{4 35' E to W} 34³⁵ ft. MLW.
Source: H-7177 WD (1947-48) - See section 4.b. of the Evaluation Report.

ITEM #13F

On T DAY, 18 March 1971 a 4 ft. by 4 ft. metal clump was located at 36°57'18"N, 76°03'48"W with a least depth of 36 ft. MLW by divers lead line. A 1969 strip ^{cleared} at 36 ft. effective depth overlapped the clump by only 200 ft. The 1969 strip at 39 ft. is disregarded. ✓

A word
11/4/71
10/1/71

Recommend the clump be charted at 36°57'18"N, 76°03'48"W as a 36 ft. sounding. - See hang #14 in the tabulation in section 5.a. of the Evaluation Report. ✓

ITEM #13G

At 36°57'03"N, 76°03'41"W is an unidentified hang at 36 ft. MLW from the 1969 work of the wire drag party. This hang was cleared in the same direction as the original hang to 36 ft. MLW on U DAY, 19 March 1971. by insufficient overlap to claim valid clearance @ 36 ft. ✓

Recommend this hang be charted as an obstruction at 36°57'03"N, 76°03'41"W with a cleared depth of 36⁵ ft. MLW. - See the tabulation in section 5.a. in the Evaluation Report.

ATTACHMENT VI

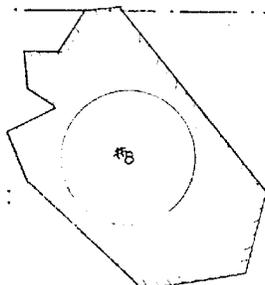
DATE	DAY LETTER	STRIP NO.	VOL. Item NO.	# POSITIONS	L.N.M.	S.N.M.	
10 FEB. 71	A	1	I 56	21	1.7	1.3	
11 FEB. 71	B	1	I 56	11	1.1	0.9	
11 FEB. 71	B	2	I 56	15	1.2	0.8	
12 FEB. 71	C	1	I 56	7	0.8	0.2	
12 FEB. 71	C	2	I 56	X8-34	0	0	
16 FEB. 71	D	1	I 56	11	1.0	0.6	
16 FEB. 71	D	2	II 56	30	2.1	1.5	
18 FEB. 71	E	1	II 54	12	0.4	0.3	
18 FEB. 71	E	2	II 54	23	1.5	1.1	
	E	3	II 54	25	1.5	0.9	
19 FEB. 71	F	1	II 54	17	0.9	0.5	
	F	2	II 54	9	1.0	0.7	
22 FEB. 71	G	TESTER VOL. - VISUAL - Item 540 - a D.P. & least depth					
24 FEB. 71	H	1	III 9	8	0.8	0.6	
	H	2	III 9	10	0.6	0.5	
25 FEB. 71	J	1	III 9	6	0.4	0.2	
	J	2	III 9	15	0.7	0.4	
1 MAR. 71	K	1	IV 25	31	0.6	0.5	
	K	2	IV 23	14	1.8	1.5	
2 MAR. 71	L	1	IV 23	15	0.8	0.7	
5 MAR. 71	M	TESTER VOL. - VISUAL - See section V - Item E of this report.					
9 MAR. 71	N	1	IV 64A	4	VISUAL		
	N	2	IV 64A	12	0.4	0.1	
10 MAR. 71	P	1	IV 55	10	0.6	0.2 Not Processed	
11 MAR. 71	Q	1	IV 55	11	0.9	0.7 Not Processed	

ATTACHMENT VI
(continued)

DATE	DAY LETTER	STRIP NO.	VOL. NO.	POSITIONS	L.N.M.	S.N.M.
12 Mar. 71	Q	2	IV 55	6	0.3	0.1 <i>Not Processed</i>
12 MAR. 71	R	1	13 1/2 53	15		
12 MAR. 71	R	2	V 13 1/2 53	9	1.0	0.6
16 MAR. 71	S	1	V 13 1/2 53	8	0.6	0.4
	S	2	V 13 1/2 53	5	0.4	0.2
18 MAR. 71	RESET RAYDIST CALIBRATION VERNIER				-0.3	R&G RUDE
18 MAR. 71	T	1	V 13 1/2 53	20	0.7	0.4
19 MAR. 71	U	1	V 13 1/2 53	26	2.0	1.2
	U	2	V 13 1/2 53	17	2.2	1.5
22 MAR. 71	V	1	V 13 1/2 53	13	1.3	0.4
	V	2	V 13 1/2 53	10	1.2	0.4
	V	3	V 13 1/2 53	9	0.8	0.4
23 MAR. 71	W	HYDRO VISUAL			8.4	<i>Not Processed</i>
24 MAR. 71	X	1	VI 13 1/2 53	5	0.6	0.3
	X	2	VI 13 1/2 53	6	0.2	1.0
25 MAR. 71	Y	1	VI 13 1/2 53	13	1.1	0.6

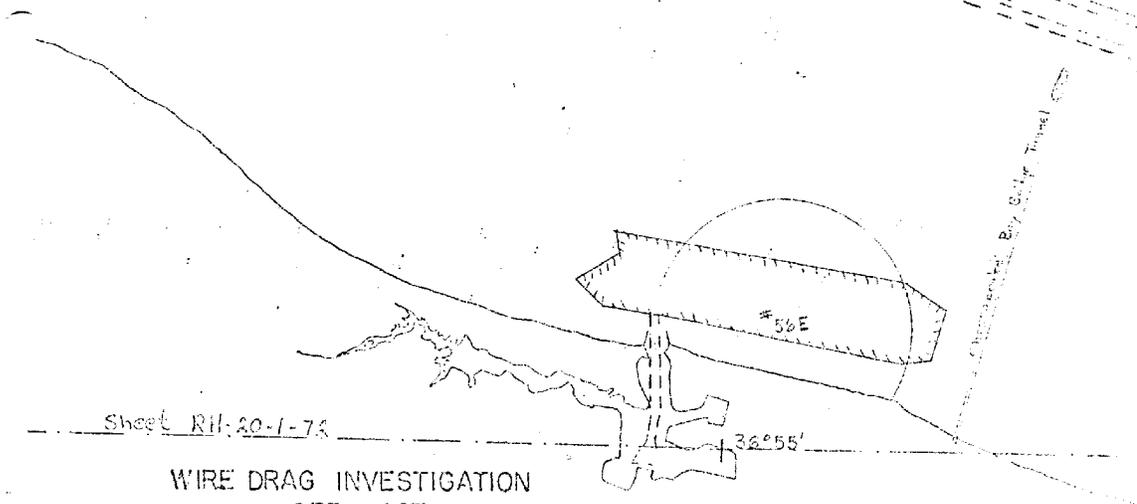
NOAA FORM 77-28 (11-72) HYDROGRAPHIC TITLE SHEET	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION REGISTER NO. H-9255WD
INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.	FIELD NO. R/H-20-1-72
State <u>Virginia</u> General locality <u>Chesapeake Bay</u> Locality <u>Lynnhaven Roads, Crumps Bank, Horseshoe, and Hampton Roads</u> Scale <u>1:20,000</u> Date of survey <u>10 Feb 72 - 30 Mar 72</u> Instructions dated <u>26 Jan 72</u> Project No. <u>OPR-467-RH-72</u> Vessel <u>NOAA SHIPS RUDE & HECK</u> Chief of party <u>CDR JAMES COLLINS</u> Surveyed by <u>CDR JAMES COLLINS</u> Soundings taken by echo sounder, hand lead, <u>WIRE DRAG</u> Graphic record scaled by _____ Graphic record checked by _____ Protracted by _____ Automated plot by _____ Verification by _____ Soundings in _____ feet at MLW <u>Approved smooth tides applied,</u> <u>exceptions are addressed in report.</u>	
REMARKS: _____ _____ _____ _____ _____ _____ _____ _____	

Sheet RH-30-1-72



76°10' + 37°00'

THIMBLE SHOAL CHANNEL



Sheet RH-30-1-72

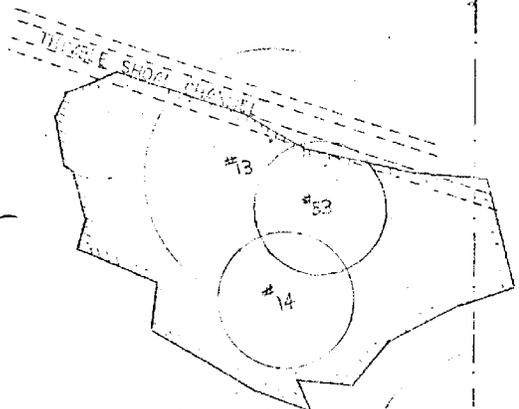
WIRE DRAG INVESTIGATION
 OPR-467
 CHESAPEAKE BAY
 NOAA SHIPS RUDE-HECK
 CDR J. COLLINS, CHIEF OF PARTY
 1972
 FEB-MAR
 SCALE 1:80,000 CGCS1222

WIRE DRAG INVESTIGATION
OPR-467
CHESAPEAKE BAY
NOAA SHIPS RUDE-HECK
CDR. J. COLLINS, CHIEF OF PARTY
1972
FEB-MAR
SCALE 1:80,000 C&GS1222

Sheet RH-80-1-72

76°00' 37°00'

DANGER AREA



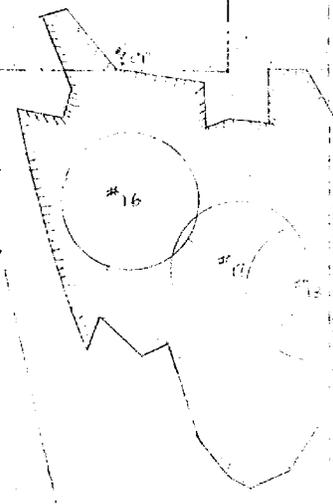
Sheet RH-80-1-72

CAPE HENRY

76°00' 36°55'



Sheet RH-80-1-72



DESCRIPTIVE REPORT
TO ACCOMPANY
WIRE DRAG FIELD NO. RH-20-1-72 ~~AND RH-20-2-72~~
PROJECT OPR-467-RH-72
ITEM INVESTIGATION - CHESAPEAKE BAY
1972
CDR JAMES COLLINS
NOAA SHIPS RUDE & HECK

A. AUTHORITY -

Project instructions, OPR-467-RH-72, Wire Drag Investigations, Chesapeake Bay, Virginia, dated January 26, 1972. Supplemental instructions dated January 27, 1972.

B. CHARACTER AND LIMITS OF THE WORK -

The purpose of this project is to locate and clear reported wrecks and obstructions hazardous to navigation in Chesapeake Bay. The locality of the survey covered by C&GS Chart 1222 is; for sheet RH-20-1-72, from latitude $36^{\circ}54'$ to $37^{\circ}04'$ and from longitude $75^{\circ}57'$ to $76^{\circ}17'$; ~~for sheet RH-20-2-72, from latitude $36^{\circ}50'$ to $37^{\circ}05'$ and from longitude $75^{\circ}51'$ to $76^{\circ}03'$.~~ The survey was conducted on a scale of 1:20,000. The effective depth of items surveyed in this area ranged from 12 to 33 feet. Raydist DR-S navigational control (3,300.4MHZ) was used on all days except strip 2, X day, and strip 1, Y day, where visual control was used.

C. CONTROL AND SHORELINE -

A listing of all signals used is given in Attachment I. No shoreline is on the boat sheets.

C. DATE OF SURVEY -

Dragging for OPR-467-RH-72 began February 14, 1972 and was terminated March 30, 1972.

E. TIDAL REDUCERS - *Approved smooth tidal correctors applied during verification.*

Preliminary reductions of each days data was made using predicted tides for the standard tide gage at Hampton Roads, Virginia, (Sewells Point) $36^{\circ}57'N$, $76^{\circ}20'W$. A listing of the tide corrections applied to tide data for each item investigated is given in Attachment II. Attachment II also includes the hourly heights for February and March 1972 on the Hampton Roads, Virginia, standard tide gage.

F. JUNCTIONS - *This data & the 1971 data combined is H-9255 WD which junctions with FE-233 WD (1969). See the Evaluation Report.*

None of the items surveyed during this project junction with other wire drag sheets. Prior drag work accomplished on Item 13 was disregarded except for noting previous hangs, and the 1972 work was con-

ducted as if this were a new item.

G. SPLITS—*See the Evaluation Report - section 6. a.*

No splits occurred within the designated drag areas.

H. GROUNDINGS AND HANGS—*See the Evaluation Report - section 5. a.*

See Attachment III, List of Groundings and Hangs.

I. GENERAL NOTES

Morning and evening Raydist calibrations at Little Creek, Virginia, were made by running the range of Little Creek NAB Lookout Tower (LOOK), Little Creek Outer Jetty Lite (REEK) and turning the right angle to Radio Transmitting Tower (RADI). Calibrations at Thimble Shoals Light House (THIM) and Calibration Beacon (BRAT) were made by circling the objects so as to position the ship at known bearings where it would cross the Raydist arcs passing through the position of the light house and the beacon. Buoy "C1", 36°55'01"N and 75°58'02"W, was also used for a lane count check whenever the ship passed it. All other calibrations and lane checks were made by three point fixes which were plotted directly on the boat sheet. See Attachment IV for Electronic Calibration Data and Daily Raydist Corrections.

J. CURRENTS

Drag strips planned with the use of C&GS Tidal Current Tables were generally satisfactory. Some problems were encountered off Virginia Beach and Little Creek where surface currents were running opposite to subsurface currents. This phenomena occurred particularly at times when dragging continued up to near the turn of the tide.

K. DISCREPANCIES AND COMPARISON WITH PREVIOUS SURVEY AND CHARTS

See the Evaluation Report - sections 4. & 5.
See Attachment V, Item Investigations.

L. PERSONNEL AND EQUIPMENT

During the OPR-467-RH-72 project, the Ships RUDE & HECK acted as guide and end vessels respectively. The RUDE & HECK launches, equipped with DE-723 fathometers, were alternated as the drag tender. During calm weather, the RUDE & HECK skiffs were used to tend the drag. Reconnaissance hydrography was done by both ships strictly for the purpose of determining upright settings. This hydrography should not be used for charting. Cuts to the end buoy and opposite vessel were made by gyro repeaters. *The recon. hydro. was not plotted as no draft, velocity, or settlement and squat correctors were determined.*

The distance from the Raydist mast to the end buoy was 265 meters when an 800 foot towline was used. Stagnara wire drag equipment was used

throughout the survey. Maximum length of drag used was 6,000 feet while 2,400 feet was the minimum.

Course changes are now being recorded on the fix only rather than just making note of changes of ten degrees or more. By giving the heading of the ships every five minutes it is felt that this sufficiently illustrates the ships' paths through the water and their resultant effect on the drag.

Officers on board during OPR-467-RH-72 work were: CDR J. Collins, LCDR L.E. Pickens, LT A.Y. Bryson, LTJG M.M. Ethridge, and ENS B.L. Wescott.

M. MISCELLANEOUS

With the experience in this area it seems that whenever the drag is with the current but opposed to the wind, the ground wire lifts more than usual. Occasional problems also occurred when the drag was set at the turn of the tide. Opposing currents would render incorrect tests because of their effect on the tester causing the rod to incline.

N. RECOMMENDATIONS

Item 8 has been sufficiently disproven to consider its removal from the charts as a hazard to navigation. Items 13, 14, and 53 should also be removed from the chart as obstructions, but within this area, the pipe mentioned in Attachment V should be charted as an obstruction cleared by wire drag to 28 ft. M.L.W. based on predicted tides. ~~It is also recommended that Items 16, 17, and 18 be removed from the charts.~~ Item 56E was not sufficiently investigated to make any recommendations at this time. Future work on Item 56E would be much easier if the drag could be kept about four feet off the bottom. This would allow the drag to miss all the insignificant trash which is scattered on the bottom in this area. Attachment V, Item Investigations, more fully explains the above recommendations.

Charting recommendations for data from prior surveys, charted data, junctional survey FE-233 WD (1969) data, and all present survey data are addressed in sections 4. & 5. of the Evaluation Report for this survey.



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY

Date : 10 July 1972
To : Chief, Hydrographic Data Section
Attention: C3233
From :
Subject: Assignment of Hydrographic
Registry Numbers

Reply to Attn. of:
Commanding Officer
NOAA Ships RUDE&HECK

Hydrographic Registry Numbers are hereby requested for the following surveys:

<u>Field Number</u>	<u>Locality</u>	<u>Project Number</u>
RH-20-1-72 ^{# 9255}	Chesapeake Bay	OPR-467-14-9255
RH-20-2-72- H-9293	Chesapeake Bay	OPR-467
RH-20-3-70 <i>C</i>	Delaware Bay	OPR-480
RH-20-4-71 <i>D</i>	Delaware Bay	OPR-480
RH-20-3-72 <i>E</i>	Delaware Bay	OPR-480
RH-20-4-72 <i>F</i>	Delaware Bay	OPR-480
RH-40-1-71 <i>C</i>	Galveston Bay	OPR-479

James Collins
Commanding Officer
NOAA Ships RUDE & HECK

typed at AMS to replace unduplicated letter AC



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY

Date : 11 July 1972

To : Chief, Hydrographic Data Section
Attention; C3233

From :

Subject: Error in letter of 10 July 1972

Reply to Attn. of:
Commanding Officer
NOAA Ships RUDE & HECK

Regarding my letter of 10 July 1972, the following error exists and should be corrected: Field Number RH-20-2-71, Delaware Bay, OPR-480 should be changed to Field Number RH-20-4-71, Delaware Bay, OPR-480.

In going through our files, I find that Field Numbers RH-20-2-71 and RH-20-3-71 were used for surveys off the coast of Louisiana on OPR-479, and that these surveys have already received Hydrographic Registry Numbers H-9256 and H-9257 respectively.

James Collins
Commanding Officer
NOAA Ships RUDE & HECK

Typed at ANC in reply to unduplicable letter NC

TABLE OF ATTACHMENTS

- I CONTROL SIGNALS
 - II TIDAL NOTES *(Field)*
 - III LIST OF GROUNDINGS AND HANGS
 - IV ELECTRONIC CALIBRATION DATA & DAILY RAYDIST CORRECTIONS — *Removed from the D.R. & filed with the survey records.*
 - V ITEM INVESTIGATIONS
 - VI FLOATING AIDS TO NAVIGATION
 - VII STATISTICS
-

See the Automated Control Listing included in
the survey records for all control information
for H-9255 WD

ATTACHMENT I
CONTROL SIGNALS

Raydist Stations: Red - Lat. 37°05'36.243"N ✓
Long 75°58'17.55"W ✓ Station # 104

This station is marked with a standard triangulation disk stamped (FEN, 1960). It is located on Fishermans Island and it is designated "FEN" on the Electronic Control Parameters Sheet. The station occupied this site from 1 Feb. 72 to 31 Mar 72.

Green - Lat. 36°55'39.071"N ✓
Long 76°00'27.189"W ✓ Station # 105

This station is not marked with a standard triangulation disk. It was established by AMC personnel and is marked with a 4"X4" stake driven into the ground. It is located on a sand dune seaward from Cape Henry Lt. House on the beach. It is designated (HENRY) on the Electronic Control Parameters Sheet. The station occupied this site from 2 Feb 72 to 31 Mar 72. - Unverified station -
The records at AMC do not have the G.P. of this station.

SHORE CONTROL SIGNALS
Sheet RH-20-1-72

Index To Triangulation Data	Date Est. or Recovered	Sta. No.	Name
Vol. 1 p. 42	1882-1943	007	CAPE Cape Henry Lighthouse (new), 1887
1 293	1869-1968	022	HENR Cape Henry Lighthouse (old)
1 241	1929-1962	023	GEIA Hygeia Inn
1 294	1939-1968	024	EACH Chesapeake Beach "B" (USE)
1 855	1955	025	FLEC Little Creek NAB Radar Reflector
1 806	1952-1968	008	TANK Little Creek NAB Tank
1 855	1955-1968	005	COVE Little Creek NAB Desert Cove Water Tank
1 855	1955-1968	002	LOOK Little Creek NAB Lookout Tower
1 292	1929-1962	001	REEK Little Creek
1 239	1929-1955	026	JETT Jetty
1 821	1952-1968	027	LITE Little Creek NAB Tank Lite Amphib Base Tk
1 621	1941-1948	003	RADI Radio Transmitting Tower
1 720	1950-1968	028	VIEW Ocean View Municipal Water Tank
1 198	1953-1969	009	THIM Thimble Shoal Lighthouse, 1919
36°58'06.701"N 76°06'43.532"W	1971*	035	BRAT Calibration Beacon
36°58'50.7"N 76°06'24.7"W	1967*	033	TUD Chesapeake Bridge Trestle "D"
36°54'25.555"N 76°05'35.659"W	1971*	032	WEST West Overhead Power Pole Lynhaven Inlet Bridge (Called "POLE" in 1971 work on sheet RH-20-1-72)

Cannot be verified - No data exists in any AMC files on these stations.

*These signals are not in the Geodetic Horizontal Control Catalog. They were established by AMC personnel at the dates given.

SHORE CONTROL SIGNALS
Sheet RH-20-3-72

Index To Triangulation Data	Date Est. or Recovered		Name
Vol. 1 p. 293	1939-1968	CAS	Casemate
1 42	1882-1943	CHE	Cape Henry Lighthouse (new)
1 292	1869-1968	CHE	Cape Henry Lighthouse (old)
1 295	1939-1968	TCR	Parcel C Tower A (USE)
1 73	1929-1968	CHE	Cavalier Hotel Cupola
1 824	1953-1968		Virginia Beach Mayflower App. East Lt.
1 824	1953-1968	CHE	Virginia Beach Mayflower App. West Lt.
1 824	1953-1968	TCR	Virginia Beach Municipal Water Tank

H-9293 WD Control

ATTACHMENT II
TIDAL NOTES *(Field)*

Hourly tide heights are supplied by the Rockville Office, for Hampton Roads, Virginia, time meridian 75°W. Height is 3.9 feet below M.L.W.

Tide data for all strips was corrected per recommendations by the Washington Office. These recommendations are as follows:

GENERAL AREA	TIME DIFFERENCE		HEIGHT DIFFERENCE	
	High	Low	High	Low
Item #8	-0h10M	-0h35M	0.0	0.0
Items #13,14,&53	-0h45M	-1h05M	+0.3	0.0
Items #16,17,&18	-0h50M	-1h15M	+0.3	0.0
Item #56E	-0h25M	-0h40M	+0.1	0.0

ATTACHMENT V
ITEM INVESTIGATIONS

Clearance by 13' effective depth is not valid due to insufficient overlap. Considered a valid clearance of 12 ft.

ITEM #8 -

The obstruction, a fish haven, charted in Lat. 37°01.88', Long. 76°14.91' was cleared in two directions to within one foot of the general bottom with an effective depth of 13 ft. M.L.W. based on predicted tides. The only hang encountered was a buoy's anchor clump with a least depth of 13 ft. M.L.W. based on predicted tides. No hazard to navigation was located, including the fish haven. It is recommended that this obstruction be removed from the chart. - Concur - See section 5. a. of the Evaluation Report.

ITEMS #13, #14, #53 -

These three items were investigated concurrently. They are as follows:

Item 13 - A sunken wreck PD charted in Lat. 36°57.27'N, Long. 76°04.03'W. It is the wreck of the fishing vessel MINNIE V.

Item 14 - A sunken wreck charted in Lat. 36°56.30'N, Long. 76°03.89'W.

Item 53 - A sunken wreck charted in Lat. 36°57.00'N, Long. 76°03.60'W.

While conducting wire drag operations in search of Item 13 on G day, 28 Feb. 72, an 8'X8'X7" aluminum clump extending one foot off the bottom was located at 36°56'30"N and 76°03'28"W. Divers reported the hang to be part of an old airplane wing which has apparently been sliding along the bottom. Recommend that the aluminum clump not be charted because, with its light weight, it can easily be moved about with the current. - Concur - See hang #11 in the tabulation in section 5. a. of the Evaluation Report.

On H day, 29 Feb. 72, an old ships anchor was located at 36°56'48"N, 76°03'18"W. The obstruction was removed and deposited ashore. - See hang #1 in the tabulation in section 5. a. of the Evaluation Report.

A scrap metal clump was found on J day, 1 Mar 72. It extends 1 1/2 ft. from the bottom and is located at 36°56'45"N, 76°03'18"W. This clump presents no hazard to navigation. Recommend that this obstruction not be charted. - See hang #4 in the tabulation in section 5. a. of the Evaluation Report.

Another ships anchor was found on M day, 6 Mar 72. This one extended 4 feet off the bottom and was located at 36°56'22"N, 76°03'58"W. It had a least depth of 25 feet based on M.L.W. as taken by divers lead line. The obstruction was removed and deposited ashore at the Atlantic Marine Center. - See hang #16 in the tabulation in section 5. a. of the Evaluation Report.

On P day, 9 Mar 72, a one foot diameter steel pipe extending 8 feet off the bottom was located at 36°57'26"N, 76°05'22"W. This is the same obstruction located one year ago on M day, 16 Mar 71, with a least depth of 31' ft. M.L.W. by divers lead line. The pipe was cleared in two directions. The shallowest depth obtained was 28 ft. based on M.L.W. Recommend that this pipe be charted at 36°57'22"N, 76°05'22"W as an obstruction. - See hang #22 in the tabulation in section 5. a. of the Evaluation Report.

It is obvious, looking at the hangs in the general area of Items 13, 14, and 53, that if these three obstructions still existed they would have been located. The drag picked up objects which were no more than 1 1/2 ft. off the bottom. Recommend that these three items be removed from the chart as hazards to navigation and that the beforementioned pipe be charted as an obstruction. - Do not concur - see section 5.a. of the Evaluation Report.

ITEMS #16, #17, and #18 - H-9293 - Completed Survey Outside the area of H-9255WD

These three items were investigated concurrently. They are as follows:

Item 16 - A sunken wreck charted in Lat. $36^{\circ}54'$, Long. $75^{\circ}58'$. It is from the U.S. Navy Wreck List No. 1324 and it is the wreck of the schooner T.F. POLLAND reported sunk in 1920.

Item 17 - A sunken wreck charted in Lat. $36^{\circ}53'47''$, Long. $75^{\circ}56'19''$ is from the U.S. Navy Wreck List No. 1334 and is an obstruction reported in 1947.

Item 18 - A sunken wreck charted in Lat. $36^{\circ}53'30''$, Long. $75^{\circ}56'16''$ is from the U.S. Navy Wreck List No. 1333 and is an obstruction reported in 1947.

On 21 Mar 72, X Day, a metal clump was hung at an effective depth of 22 feet based on M.L.W. but it was on an inclined section near the low end which was at 27 ft. The charted depth is 27 ft. and the hang was cleared at 26 ft. by strip 1 on EA Day based on predicted tides. The majority of this area was covered effectively to within two feet of the general bottom. It is recommended that these three items not be plotted as hazards to navigation and that they be removed from the chart.

ITEM 56E -

Item 56E is a 36 foot barge reported sunk in 18 ft. of water in the entrance to Little Creek Harbor. The position is reported to be $36^{\circ}55'55''N$, $76^{\circ}09'29''W$.

A concrete clump was found on strip 1 W Day extending $\frac{6}{4}$ ft. off the bottom. It was hung at an effective depth of $1\frac{1}{2}$ ft. and cleared at an effective depth of $1\frac{1}{2}$ ft. on R Day, strip 2. The charted bottom depth at the hang is $2\frac{3}{4}$ ft. This is within the naval anchorage area and might constitute a hazard to navigation for deep draft vessels which could anchor in this area. It is recommended that this obstruction be charted at $36^{\circ}55'57''N$, $76^{\circ}09'08''W$. It should be further shown that this obstruction was cleared by wire drag to an effective depth of $1\frac{1}{2}$ ft. based on M.L.W. - This obstruction was hung and identified as a rock on FE-233 WD (1969) - See hang #32 in the tabulation in section 5.a. of the Evaluation Report.

An unidentified hang occurred at $36^{\circ}55'5\frac{1}{2}''N$, $76^{\circ}08'38''W$ with an effective depth of $1\frac{1}{2}$ ft. on W day, strip 1. The charted bottom depth is 21 ft. and it was cleared to $1\frac{1}{2}$ ft. on W day, strip 2. Excessive sag in the ground wire be thought to account for this hang. Further work should be done on this hang before it is considered important enough to chart. - See hang #30 in the tabulation in section 5.a. of the Evaluation Report.

A chunk of scrap metal 2 ft. off the bottom was hung at 36°55'55"N, 76°08'59"W. It was identified by divers and found to be near enough to the bottom not to constitute a hazard. An anchor extending 1 1/2 ft. off the bottom was hung and identified by divers at 36°56'18"N, 76°09'38"W. On the second drag over this hang it was again hung because of excessive sag in the ground wire. While picking up the wire, an A-frame was brought up. It was in good condition and possibly it is part of the barge pile driver which is being searched for. This whole area around 56E is extremely littered with junk on the bottom and could well use more time for dragging before Item 56E can be disproven.

See hang #31 in the Tabular
in Sec. on S. of the
Evaluation Report.

See hang #31 in the
Tabular in section
S. of the Evaluation
Report.

Not noted in any of the
survey records for any
of the survey strips.
No way of determining
where the A-frame was
found, its dimensions, or
how it was disposed of.

ATTACHMENT VI
FLOATING AIDS TO NAVIGATION

Buoy "B-2"
Date Located: 16 Feb. 72
Lat - Long: 37°02'08"N, 76°15'45"W
General Depth: 14 ft.

Buoy "B-3"
Date Located: 16 Feb. 72
Lat - Long: 37°02'05"N, 76°15'57"W
General Depth: 14 ft.

Mooring Buoy
Date Located: 2 Mar 72
Lat - Long: 36°56'51"N, 76°03'19"W
General Depth: 39 ft.

Buoy "C-3"
Date Located: 10 Mar 72
Lat - Long: 36°55'57"N, 76°03'45"W
General Depth: 26 ft.

Buoy "C-1" — *Buoy not hung by this survey. No detached position for this buoy was found in the survey records.*
Date Located: 16 Feb. 72
Lat - Long: 36°55'01"N, 75°58'02"W
General Depth: 33 ft.

NOTE: These buoys were located by placing the ship next to them and obtaining a red and green reading on the Raydist so that they could be plotted on the boat sheet. The latitude and longitude was then determined from the boat sheet plot.

ATTACHMENT VII
STATISTICS SHEET

DATE	DAY LETTER	STRIP NO.	VOLUME NO.	NUMBER OF POSITIONS	L.N.M.	S.N.M.
14 FEB. 72	A	I-Item 8	I	16	1.7	1.0
		II-Item 8	I	12	1.0	0.6
15 FEB. 72	B	I-Item 8	I	28	1.9	1.3
		II-Item 8	I	13	1.5	1.1
16 FEB. 72	C	I-Item 8	I	17	1.3	0.9
		II-Item 8	I	17	1.5	1.1
18 FEB. 72	D	I-Item 8	I	17	1.9	1.7
24 FEB. 72	E	I-Items 13, 14, #53	I	08	0.9	0.5
25 FEB. 72	F	I-Items 13, 14, #53	II	18	2.8	1.4
28 FEB. 72	G	I-Item 8	II	11	0.5	0.2
		II-Items 13, 14, #53	II	11	1.2	0.5
		III-Items 13, 14, #53	III	23	1.7	0.7
29 FEB. 72	H	I-Items 13, 14, #53	II	10	1.0	0.5
		II-Items 13, 14, #53	II	16	2.3	1.2
1 MAR 72	J	I-Items 13, 14, #53	II	07	0.6	0.3
		II-Items 13, 14, #53	II	15	1.4	0.7
2 MAR 72	K	I-Items 13, 14, #53	III	12	1.5	0.8
3 MAR 72	L	I-Items 13, 14, #53	III	10	0.8	0.6
6 MAR 72	M	I-Items 13, 14, #53	III	16	1.3	1.0
		II-Items 13, 14, #53	III	11	1.3	0.8
7 MAR 72	N	I-Items 13, 14, #53	III	13	1.1	0.7
		II-Items 13, 14, #53	III	16	2.0	1.2
		III-Items 13, 14, #53	III	17	1.3	0.8
9 MAR 72	P	I-Items 13, 14, #53	III	11	1.3	0.8
		II-Items 13, 14, #53	III	07	0.8	0.5
		III-Items 13, 14, #53	IV	03	0.4	0.2
10 MAR 72	Q	I-Items 13, 14, #53	IV	14	1.6	0.8
13 MAR 72	R	I-Item 56E	IV	17	2.0	1.6
		II-Item 56E	IV	16	2.4	1.2
14 MAR 72	S	* I-Items 16, 17, #18	IV	16	1.1	0.9
15 MAR 72	T	* I-Items 16, 17, #18	IV	24	2.1	1.5
16 MAR 72	U	* I-Items 16, 17, #18	IV	22	2.4	1.9
		* II-Items 16, 17, #18	V	16	2.2	1.3
17 MAR 72	V	* I-Items 16, 17, #18	V	13	1.3	1.4
20 MAR 72	W	I-Item 56E	V	05	0.4	0.1
		II-Item 56E	V	07	0.7	0.2
		III-Item 56E	V	08	0.7	0.2
21 MAR 72	X	* I-Items 16, 17, #18	V	17	1.8	1.1
		* II-Items 16, 17, #18	V	29	2.7	2.2
22 MAR 72	Y	I-Item 56E	V	22	1.5	0.9
23 MAR 72	Z	I-Item 56E	VI	23	2.3	1.5
24 MAR 72	AA	I-Item 56E	VI	10	1.2	0.7
27 MAR 72	BA	I-Item 56E	VI	05	0.4	0.1

* Investigations on H-9293 WD and not part of H-9255 WD.

DATE	DAY LETTER	STRIP NO.	VOLUME NO.	NUMBER OF POSITIONS	L.N.M.	S.N.M.
			II-Item 56E VI	09	0.8	0.3
			III-Item 56E VI	06	-.-	-.-
28 MAR 72	CA		I-Item 56E VI	08	0.7	0.7
			II-Item 56E VI	09	1.3	0.3
			III-Item 56E VI	08	0.8	0.3
		(Not in volume)	IV-Item 56E VI	12	-.-	-.-
29 MAR 72	DA-		* I-Items 16, 17, 18 VII	31	2.3	2.1
			II-Item 56E VII	09	0.5	0.2
30 MAR 72	EA-		III-Item 56E VII	08	0.8	0.4
			* I-Items 16, 17, 18 VII	08	0.8	0.4
					41.7	S.N.M.
						TOTAL

* Investigations on H-9293 WD and not part of H-9255 WD.

ATTACHMENT III
LIST OF GROUNDINGS AND HANGS

For correct position and depth information,
See section 5.a. of the Evaluation Report.

Position and Deyletter	Latitude	Longitude	Ground Effective Depth	Cleared by Strip	Cleared Effective Depth	Sounding	Charted Depth	Item Number	Remarks
28A	37°02'07"	76°14'39"		B1	12'		14'	8	#5 Hang slipped off - uninvestigated hang
34C	37°02'08"	76°15'45"					14'	8	#5 Nav. Buoy "B2"
34C	37°02'05"	76°15'57"					14'	8	#6 Nav. Buoy "B3"
19E	37°07'12"	76°04'35"	35'	1971 WK.	33'		37'	13	#8 Mud grounding hang on bottom
11C	37°02'11"	76°14'41"	15'	B-1 N-5	12'	13' L.L.	14'	8	#5 Anchor clump
21G	38°57'00"	76°04'57"	29'	1971 WK. W-E	29'		31'	13	#2 Unidentified hang, wire ignud on both sides of hang - hang on bottom
43G	38°56'30"	76°03'28"	33'	G-3 W-E	29'		34'	13	#11 8'X8'X1' Aluminum clump
10R	38°56'45"	76°03'11"	39'	M-2	29'		40'	13	#1 Anchor was removed
7J	38°56'45"	76°03'10"	34'/39'	L-1	33'		39'	13	#5 Scrap metal 6 in. off bottom
7J	38°56'45"	76°03'10"	34'/39'	L-1	33'		39'	13	#4 Scrap metal 1 1/2 ft. off bottom
13K	38°56'51"	76°03'18"	33'				39'	13	#6 Mooring buoy
10E	38°56'51"	76°03'19"	33'				39'	13	#8 Mooring buoy
12R	38°56'42"	76°03'56"	25'			25'	29'	13	#16 Anchor was removed
26N	38°56'32"	76°03'18"	29'	N-1	29'		35'	13	#9 Mud grounding - Uninvestigated Hang
26I	38°56'41"	76°03'11"	33'	N-1	33'		39'	13	#3 Mud grounding - Uninvestigated Hang
18P	38°57'38"	76°05'22"	29'	P-3	23'		37'	13	#22 Hang from 1971 work. 31' L.L. from 1971 - iron pipe, 1 1/2 in dia, 8 ft. off bottom
14Q	38°55'37"	76°03'45"	22'				26'	13	#13 Nav. buoy "C-3"
18R	38°55'57"	76°09'03"	16'	R-2	13'		22'	56E	#32 Clump 1/2 ft. off bottom
6W	38°55'54"	76°08'35"	19'	W-2	16'		21'	56E	#20 Unidentified - Uninvestigated Hang
12W	38°55'55"	76°08'59"	17'	Z-1	16'		22'	56E	#1 Scrap metal 2 ft. off bottom
20N	38°55'58"	76°09'04"	18'	R-2	13'		22'	56E	#2 Concrete clump 1/2 ft. off bottom
46X	38°54'42"	75°57'47"	22'/27'	U-1/EA-1-21'/26'	27'		27'	16	Metal clump - H-9293 W.D
22Y	38°56'18"	76°09'38"	24'	R-1	21'	wrist sage	25'	56E	#37 Anchor 1 1/2 feet off bottom
10AA	38°56'18"	76°09'58"	21'	R-1	21'		25'	56E	#7 Same anchor as above
21M									#12 Uninvestigated Temp Hang
24									#11 Uninvestigated Temp Hang
58A									#10 Uninvestigated Hang
14BA									#38 Uninvestigated Hang
25CA									#35 Tractor Tread
46DA									#34 Mushroom anchor - 3 ft. off bottom
46DA									#35 Mushroom anchor - 4 ft. off bottom
44DA									#36 Mushroom anchor - 4 ft. off bottom
42DA									#36 Concrete clump - 2' x 4' x 4'
51DA									#33 Tractor Tread

See the Evaluation Report - section 5.a.

See the Evaluation Report - section 5.a. (About 25 items addressed in Sect. 5.a.)

APPROVAL SHEET

All records of this survey prior to smooth plotting are hereby approved. The OPR-467-RH-72 field work was personally supervised by the undersigned and the boat sheets and records were inspected daily. This survey with respect to Items 8, 13, 14, 53, 16, 17, and 18 is considered complete and adequate for charting. Additional field work is recommended for Item 56E.



James Collins
CDR NOAA

DATE: July 28, 1982

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 863-8610, Hampton Roads, Virginia

Period: February 1, 1971 - March 30, 1972

HYDROGRAPHIC SHEET: H-9255

OPR: 467

Locality: Chesapeake Bay, Virginia

Plane of reference (mean ~~XXXX~~ low water): 3.9 ft.

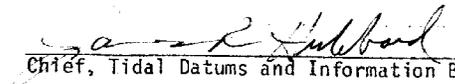
Height of Mean High Water above Plane of Reference is 2.5 ft.

REMARKS: Recommended Zoning:

ITEM 64A at 36°57.82' zone direct
76°20.38'

ITEM 8 at 37°01.88' and ITEM 9 at 37°02.00'
76°14.91' 76°13.97'
Apply a -30 minute time correction

ITEM 55 at 37°00.77'
76°03.20'
Apply -1 hour time correction and x1.15 range ratio.


Chief, Tidal Datums and Information Branch

July 28, 1982

2

Tide Note for Hydrographic Sheet - H-9255

ITEM 23 at 37°15.75' and ITEM 25 at 37°18.66'
76°11.19' 76°11.30'

Apply -15 minute time correction and x0.85 range ratio

ITEM 56 at 36°57.30' and ITEM 56E at 36°55.92'
76°10.78' 76°09.48'

Apply -50 minute time correction and x1.05 range ratio

ITEM E at 36°51.14' apply +10 minute time correction and x1.12 range ratio
76°18.11'

ITEM 13 at 36°57.27'
76°04.03'

ITEM 14 at 36°56.30'
76°03.89'

ITEM 53 at 36°57.00'
76°03.60'

ITEM 54 at 36°56.25'
76°06.31'

ITEM 54D at 36°54.80'
76°05.42'

Apply -1 hour time correction and x1.09 range ratio

GEOGRAPHIC NAMES

H-9255 WD

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
	ON CHART NO. 400, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000	ON PREVIOUS SURVEY NO.	CON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	RAND McNALLY ATLAS	U.S. LIGHT LIST			
CHESAPEAKE BAY (Title)	✓										✓
HARRISON ROADS (Title)	✓										2
LYNNHAVEN ROADS (Title)	✓										3
NORFOLK (Title)	✓										4
CRUMPS BANK (Title)	✓										5
THIMBLE SHOAL	✓										6
LITTLE CREEK	✓										7
THIMBLE SHOAL CHANNEL	✓										8
NEWPORT NEWS CHANNEL	✓										9
NEWPORT NEWS CHANNEL	✓										10
NORFOLK NEWS CHANNEL	✓										11
LYNNHAVEN INLET	✓										12
SEWELLS POINT SPIT	✓										13
VIRGINIA SEWELLS POINT	✓										14
NORFOLK	✓										15
VIRGINIA BEACH	✓										16
CAPE HENRY	✓										17
LITTLE CREEK (Ppl)	✓										18
INLET	✓										19
CHESAPEAKE BAY BRIDGE AND TUNNEL TRESTLE A CHESAPEAKE BAY BRIDGE	✓										20
AND TUNNEL TRESTLE B	✓										21
LYNNHAVEN SHORES	✓										22
OCEAN PARK	✓										23
CHESAPEAKE BEACH	✓										24
EAST OCEAN VIEW	✓										25

Approved:

Chas. E. Harrington
Chief Geographer - N/C&S 5

3 MARCH 1983

NOAA FORM		U.S. DEPARTMENT OF COMMERCE			REGISTRY NUMBER		
WIRE DRAG SURVEY STATISTICS					H-9255 WD		
RECORDS ACCOMPANYING SURVEY: To be completed when survey is processed.							
RECORD DESCRIPTION		AMOUNT		RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET(A&D)		1		SMOOTH OVERLAYS: POS., ARC		1	
DESCRIPTIVE REPORT		1		FIELD SHEETS AND OTHER OVERLAYS		1	
DESCRIPTION	TENDER RECORDS	GUIDE RECORDS	END RECORDS	DEPTH/POS (HYDRO)	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/SOURCE DOCUMENTS
ACCORDIAN FILES							
ENVELOPES							
VOLUMES							
CARRIERS						2	
BOXES	1					2	
NAUTICAL CHARTS(List): 400, 34th Ed.; 481, 19th Ed.; 481, 20th Ed.; 494, 15th Ed.; &							
SHORELINE MAPS(List): 562, 8th Ed.							
SPECIAL REPORTS(List): Calibration Report For Project OPR-467-R/H-71							
<i>OFFICE PROCESSING ACTIVITIES</i>							
<i>The following statistics will be submitted with the cartographer's report on the survey</i>							
PROCESSING ACTIVITY				AMOUNTS			
				VERIFICATION	EVALUATION	TOTALS	
POSITIONS (GUIDE, END, DP'S)						2141	
POSITIONS REVISED				182	0	182	
CONTROL STATIONS REVISED				0	0	0	
DEPTHS REVISED(SOUNDINGS, DRAG DEPTHS)				N/A	0	0	
				TIME-HOURS			
				VERIFICATION	EVALUATION	TOTALS	
PRE-PROCESSING EXAMINATION				28	0	28	
VERIFICATION OF CONTROL				13	0	13	
POSITION VERIFICATION				72	0	72	
SUBDIVISION OF STRIPS				236	0	236	
SMOOTH POSITION SHEET				0	80	80	
SMOOTH SHEET(A&D)				0	177	177	
EVALUATION OF SIDESCAN SONAR RECORDS				0	0	0	
COMPARISON WITH SURVEYS AND CHARTS				0	79	79	
EVALUATION REPORT				0	93	93	
OTHER				0	46	46	
TOTALS				349	475	824	
<i>Pre-processing Examination by</i>				<i>Beginning Date</i>		<i>Ending Date</i>	
M. B. Hickson				May 10, 1982		May 15, 1982	
<i>Verification of Field Data by</i>				<i>Time(Hours)</i>		<i>Ending Date</i>	
M. B. Hickson				349		Nov. 14, 1982	
<i>Verification Check by</i>				<i>Time(Hours)</i>		<i>Ending Date</i>	
R. D. Sanocki				16		Feb. 14, 1984	
<i>Evaluation and Analysis by</i>				<i>Time(Hours)</i>		<i>Ending Date</i>	
M. B. Hickson				475		May 3, 1983	
<i>Inspection by</i>				<i>Time(Hours)</i>		<i>Ending Date</i>	
R. D. Sanocki				24		Feb. 22, 1984	

ATLANTIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO: H-9255WD

FIELD NO: R/H-20-1-71 &
R/H-20-2-72

Virginia, Chesapeake Bay, Lynnhaven Roads, Crumps Bank, Horseshoe, Hampton Roads, and South of Wolftrap

SURVEYED: February 10 through March 31, 1971 &
February 10 through March 30, 1972

SCALE: 1:20,000

PROJECT NO: OPR-467-R/H-71 &
OPR-467-R/H-72

SOUNDINGS: Wire Drag & Leadline

CONTROL: Raydist (Hyperbolic)1971
Raydist (Range-Range)1972
Visual (Sextant Fixes on
Shore Signals)1971 & 72

Chief of Party.....M. N. Walter (1971)
.....J. Collins (1972)

Surveyed by.....G. R. Schaefer (1971)
.....A. Y. Bryson (1971 & 72)
.....J. J. Morley (1971)
.....M. M. Ethridge (1971 & 72)
.....L. E. Pickens (1972)
.....B. L. Wescott (1972)

Smooth Sheet by.....M. B. Hickson

1. PURPOSE OF SURVEY

The purpose of this survey was to investigate and prove or disprove the existence of numerous items in the area of Chesapeake Bay and Hampton Roads. Fourteen items were investigated on this survey. The results of the investigations are discussed in this report and are portrayed on the smooth sheet (A&D).

2. CONTROL AND SHORELINE

a. The source of control was not adequately described in section C. and Attachment 1 of either of the two Descriptive Reports. Section 6.b of this report addresses this deficiency.

b. Shoreline portrayed in brown on the smooth sheet (A&D) is only intended for orientation purposes.

The sources of shoreline are:

Chart 400, 34th Edition, December 12, 1970

Chart 481, 19th Edition, March 6, 1971

Chart 562, 8th Edition, February 20, 1971

3. Junctions

An adequate junction has been effected with FE-233WD (1969) in the areas of investigation of items 13, 14, 53, 56, and 56E. The complete junction with overlapping effective depths, junctional limits, hangs, and groundings are shown on the smooth sheet (A&D). The junction is unusual in that the present survey is common to almost all of the areas covered by FE-233WD (1969).

4. Comparison with Hydrographic Surveys

a. Hydrography (Subsequent)

H-9910 (1980) 1:10,000

H-9814 (1980) 1:10,000

Comparisons between the present survey and the above subsequent hydrographic surveys common to the areas of item investigations reveals the following:

1) H-9910 (1980) is a subsequent hydrographic survey that is common to approximately 75-80% of items 56 and 56E areas of investigation. Only a small area to the west is not covered by survey H-9910. Detailed comparison between present wire drag survey effective depths and survey H-9910 hydrography is accomplished in the Evaluation Report for that survey.

2) H-9814 (1980) is a subsequent hydrographic survey that is common to 100% of items 13, 14, 53, 54, and 54D areas of investigation. Detailed comparison between present wire drag survey effective depths and survey H-9814 hydrography is accomplished in the Evaluation Report for that survey.

b. Hydrography (Prior)

H-8878 (1966) 1:10,000

H-8724 (1962) 1:10,000

H-7960 (1952) 1:20,000

H-7824 (1948-50) 1:10,000

H-7783 (1949) 1:10,000

H-7750 (1948-50) 1:40,000

H-7721 (1949) 1:10,000

H-7171 (1947) 1:10,000

H-7090 (1946) 1:20,000

H-7089 (1946) 1:10,000

H-7024 (1944-45) 1:5,000

H-6962 (1944) 1:20,000

Comparison between the present survey and the above prior hydrographic surveys common to the areas of item investigations reveals the following:

1) H-8878 (1966) is a prior hydrographic survey common to approximately 90-95% of items 64 and 64A areas of investigation. Only a small area to the east is not covered by this prior survey. No conflicts exist between present effective depths and prior soundings within the common area.

2) H-8724 (1962) is a prior hydrographic survey common to a very small southern portion of items 13, 14, 53, 54, and 54D areas of investigation in the vicinity of Lynnhaven Inlet. Comparison of prior data within the common area is discussed in the Evaluation Report of survey H-9814 (1980). Bottom change since 1962 in the area of survey H-8724 obviates any comparison. The 5-foot least depth found on a wreck by survey H-9255WD was in survey H-8724 depths of 1 to 3 feet.

3) H-7960 (1952) is a prior hydrographic survey common to all of items 23 and 25 areas of investigation. There are 9 prior soundings shoaler than present survey effective depths by 1 to 3 feet in the vicinity of Latitude $37^{\circ}19'$, Longitude $76^{\circ}10'$. These conflicting soundings are in the vicinity of a shoal. Differences between prior soundings and present survey effective depths are attributed to currents shifting bottom material and other naturally occurring changes over the 19 years between the surveys.

4) H-7824 (1948-50) is a prior hydrographic survey common to approximately 90% of items 8 and 9 areas of investigation. Only a small area to the east and southeast is not covered by this prior survey. A scour (a small area of 19 to 20 foot depths in general depths 16 feet) is evident on the prior survey at the location of the wreck of the cargo ship DRUID HILL as found by the present survey. No conflicts exist between prior soundings and present survey effective depths within the common area except in the vicinity of Thimble Shoal where 11 soundings are shoaler by 1-foot than present effective depths. The differences are attributed to currents and other naturally occurring changes in conjunction with the dredging of the channel to the south of Thimble Shoal and over the 21 or more years between the surveys.

5) H-7783 (1949) is a prior hydrographic survey common to the southwestern portion of items 56 and 56E areas of investigation. Part of the common area is covered by subsequent hydrographic survey H-9910 (1980) and comparisons with the common prior data is discussed in the Evaluation Report of that survey. In areas not common to H-9910 (1980), comparison reveals numerous conflicts between prior soundings and present effective depths in the extreme southwestern area of the present survey. These conflicting prior soundings are 1 to 5 feet shoaler than present survey effective depths. These differences are attributed to currents shifting bottom material and other naturally occurring changes over the 22 years between the surveys.

6) H-7750 (1948-50) is a prior hydrographic survey common to items 8, 9, 13, 14, 53, 54, 54D, 56, and 56E areas of investigation.

Comparison of prior data within the common area of subsequent hydrographic surveys H-9814 (1980) and H-9910 (1980) is discussed in the Evaluation Reports for those surveys. Areas not common to either H-9914 (1980) or H-9910 (1980) include the extreme western portion of item 56 area of investigation and the southeastern portion of items 8 and 9 areas of investigation. In the item 56 area of investigation, 6 prior soundings are 1-foot shoaler than present survey effective depths. In the items 8 and 9 areas of investigation, 3 prior soundings on Thimble Shoal are 1-foot shoaler than present survey effective depths. These differences are attributed to currents shifting bottom material and other naturally occurring changes over the 21 or more years between the surveys. A visible obstruction identified as a stake at Latitude 37°01.14', Longitude 76°14.09' on the prior survey was cleared by an effective depth of 12 feet on the present survey. It is recommended that the stake be deleted from the chart.

7) H-7721 (1949) is a prior hydrographic survey common to a small southeastern portion of items 13, 14, 53, 54, and 54D areas of investigation. Comparison of prior data within the common area is discussed in the Evaluation Report of survey H-9814 (1980).

8) H-7171 (1947) is a prior hydrographic survey common to a small eastern portion of the items 64 and 64A area of investigation. Several conflicts exist between prior soundings and present survey effective depths in the vicinity of the eastern edge of the maintained (dredged) channel. These differences are attributed to currents shifting bottom material and dredging of the channel.

9) H-7090 (1946) is a prior hydrographic survey common to small portions of items 13, 14, 53, 54, 54D and 56 areas of investigation. Comparison of prior data within the common area is discussed in the Evaluation Reports of surveys H-9814 (1980) and H-9910 (1980).

10) H-7089 (1946) is a prior hydrographic survey common to the western third of items 13, 14, 53, 54, and 54D areas of investigation and the eastern half of items 56 and 56E areas of investigation. Comparison of prior data within the common area is discussed in the Evaluation Reports of surveys H-9814 (1980) and H-9910 (1980).

11) H-7024 (1944-45) is a prior hydrographic survey common to item 56E area of investigation in the vicinity of the entrance to Little Creek. Comparison of prior data within the common area is discussed in the Evaluation Report of survey H-9910 (1980).

12) H-6962 (1944) is a prior hydrographic survey common to a small northeastern portion of items 13, 14, 53, and 54 areas of investigation. Comparison of prior data within the common area is discussed in the Evaluation Report of survey H-9814 (1980).

The present wire drag survey is considered adequate to supersede conflicting prior hydrography within the common area.

c. Wire Drag

FE-233 WD (1969)

FE-205 WD (1966) (FE No. 1, 1967)
FE-154 WD (1956) (FE No. 13, 1957)
H-7677 WD (1947-48)
H-7177 WD (1947-48)
H-7028 WD (1944-45) & Additional Work of 1950.

1) FE-233 WD (1969) is common to the areas of investigation of items 13, 14, 53, 56, and 56E on the present survey. This previous wire drag field examination is considered a junctional survey and is addressed under section 3. of this report with all hangs and groundings being disposed of under section 5.a of this report.

2) FE-205 WD (1966) (FE No. 1, 1967) is common to the areas of investigation of items 8 and 9 on the present survey. Within the common area the present survey obtained effective depths from 4 feet deeper to 1-foot shoaler than the prior survey. All three hangs encountered on the present survey in the investigation of items 8 and 9 were cleared by an effective depth of 12 feet in two directions by the prior survey. No conflicts exist between present and prior effective depths within the common area.

3) FE-154 WD (1956) (FE No 13, 1957) is common to the eastern portion of the areas of investigation of items 13, 14, 53, 54, and 54D on the present survey. Within the common area the present survey obtained effective depths from 6 feet deeper to 6 feet shoaler than the prior survey. No conflicts exist between present and prior effective depths within the common area.

4) H-7677 WD (1947-48) is common to the western half of the area of investigation of item 25. Within the common area the present survey obtained effective depths from 3 feet deeper to 1-foot shoaler than the prior survey. No conflicts exist between present and prior effective depths within the common area.

5) H-7177 WD (1947-48) is common to the areas of investigation of items 13, 14, 53, 54 and 54D and the northwestern portion of item 56 on the present survey. All items (13, 14, and 53) common to this prior survey were reported subsequent to the dates of the prior survey. Three hangs encountered on the prior survey were common to the present survey and were brought forward to the smooth sheet (A&D). These prior hangs are:

a) Dangerous Submerged Obstruction, unknown, in Latitude $36^{\circ}57'19.5''$, Longitude $76^{\circ}09'48.4''$, hung at 15 feet, cleared by 15 feet. This prior hang is not in an area covered by the present survey but is in close proximity to a hang on sections of railroad track (see hang #39 in the tabulation in section 5.a of this report). The present & prior hangs possibly are the same obstruction but insufficient information exists to make this determination. It is therefore recommended that this 15-foot wire drag sounding charted from this prior survey be retained as charted unless a future investigation is needed to resolve this item.

b) Dangerous Submerged Obstruction, unknown, in Latitude $36^{\circ}57'38.6''$, Longitude $76^{\circ}05'09.1''$, detached sounding of 35 feet, cleared by 32 feet. This obstruction was not found by the present survey but was

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cleared by a maximum effective depth of 35 feet. It is recommended that this obstruction be charted as a submerged obstruction with a wire drag clearance of 35 feet.

c) Dangerous Submerged Wreck, hulk, in Latitude 36°57'33.1", Longitude 76°04'32.0", hung at 34 feet, cleared by 31 feet. This wreck was not found by the present survey but was cleared by a maximum effective depth of 35 feet. The greater clearance depth obtained over the hulk is attributed to deterioration and settling of hulk during the 24 years between the present and prior surveys. It is recommended that this wreck be charted as a submerged wreck with a wire drag clearance of 35 feet.

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The prior survey covers areas of numerous hangs on the present survey by generally shoaler effective depths. Prior effective depths range from 5 feet deeper to 12 feet shoaler than effective depths on the present survey within the common area. No conflicts exist between present and prior effective depths within the common area except the previously noted hulk.

6) H-7028 WD (1944-45) and Additional Work of 1950 is common to two small portions of the areas of investigation of items 13, 14, 53, 54, and 54D on the present survey. The charted positions of the items do not fall within the limits of the prior survey. One hang and one grounding encountered on the prior survey were common to the present survey and were brought forward to the smooth sheet (A&D). The hang and grounding are:

a) Dangerous Submerged Obstruction, unknown, in Latitude 36°55'32.8", Longitude 76°04'04.2", hung at 19 feet, cleared by 16 feet. This obstruction was not found by the present survey but was cleared by an effective depth of 23 feet. However the present survey clearance is not considered valid as clearance is in one direction only and the overlap is insufficient to claim valid clearance. The present survey does indicate the possibility that the obstruction has settled and that a greater clearance depth may be obtainable. Consideration for additional work to obtain a greater clearance depth is indicated by the present survey. It is recommended that this submerged obstruction be retained as charted.

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b) Grounding, 43 feet, in Latitude 36°56'42.5", Longitude 76°02'04.8", not cleared. No hangs or groundings were encountered by the present survey in the vicinity of the prior grounding, but a maximum clearance effective depth of 38 feet was obtained. Both prior (H-7750) and subsequent (H-9814) hydrographic surveys show no indication of a shoal in the area of the grounding. A strong possibility exists that a sloping wreck or obstruction caused the grounding on the prior survey. Consideration for additional field work to resolve this grounding is indicated by present data. It is recommended that the grounding be retained as charted.

Effective depths on the prior survey range from 7 feet shoaler to 10 feet deeper than present effective depths within the common area. No conflicts exists between present and prior effective depths within the common area except the previously noted obstruction.

5. Comparison with Charts 400, 34th Edition, December 12, 1970

481, 19th Edition, March 6, 1971

481, 20th Edition, January 22, 1972
494, 15th Edition, October 10, 1970
562, 8th Edition, February 20, 1971

a. Hydrography

Charted hydrography within the common areas originates with the previously discussed prior surveys H-7960 (1952), H-7824 (1948-50), H-7783 (1949), H-7750 (1948-50), H-7721 (1949), H-7090 (1946), H-7089 (1946), H-7024 (1944-45), H-6962 (1944) and soundings from sources not readily ascertainable. The disposition of the charted hydrography from identified sources common to this wire drag survey are adequately discussed in section 4. of this report and in the Evaluation Reports of subsequent surveys H-9910 (1980) and H-9814 (1980). There are no charted soundings conflicting with present survey effective depths which originated from unascertained sources.

Charted wire drag data within the common area originates with junctional survey FE-233WD (1969) and prior surveys H-7177 WD (1947-48) and H-7028 WD (1944-45) and Additional Work of 1950 which are adequately discussed in section 4. of this report.

Additional charting recommendations based on the results of this present survey and junctional survey FE-233 WD (1969) are tabulated as follows:

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendation</u>
<u>ASSIGNED ITEMS INVESTIGATED</u>					
Item 8-Obstruction-Fish Haven (old car bodies)	On Chart No. 562: Latitude 37°01.88' Longitude 76°14.91'	Not located by H-9255	13 ft.-insufficient overlap 12 ft.-valid clearance	14 ft.	Source: N. to M. No. 2 of 1962. Clearance depth range from 0 to 3 feet shoaler than charted hydrography within the search radius. The coverage is adequate to disprove the existence of the Obstruction-Fish Haven as charted. Delete the Obstruction-Fish Haven from the chart. The possibility exists that the uninvestigated hang #54 is this obstruction, refer to hang #54 of this tabulation.
Item 9-Sunken Wreck (cargo ship DRUID HILL)	On Chart No. 562: Latitude 37°02.48' Longitude 76°14.46'	12 ft.	12 ft. (headline)	16 ft.	Source: U.S. Navy Wreck List No. 4777. See hang #52 in this in this tabulation for charting recommendations.

Item Description Geographic Position Minimum hang or Grounding Depth Maximum Clearance or Minimum Sounding Charted or Hydro Survey Depths Charting Recommendation

ASSIGNED ITEMS INVESTIGATED

Item 13-Dangerous Sunken Wreck, PD (fishing vessel MINNIE V)	On Chart No. 481: Latitude 36°57.29' Longitude 76°04.06'	Not located by H-9255	38 ft. by H-9255- insufficient over-lap 36 ft. by FE-233WD valid clearance	39 ft.	Source: N. to M. No. 17 of 1960. Clearance depths range from 1 ft. deeper to 11 ft. shallower than charted hydrography within the search radius. In general, coverage is within 2 to 4 feet of the charted bottom. As the criteria for disapproval has not been met, retain as charted the <u>Sunken Wreck</u> with the <u>ED</u> notation and with a wire drag clearance of 36 feet.
Item 2 on FE-233WD					

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<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendation</u>
Item 14-Non-Dangerous Sunken Wreck (Unknown)	On Chart No. 1222 (Wreck Chart): Reported Latitude 36°56.30' Longitude 76°03.89'	Not located by H-9255	26 ft.	29 ft.	Source: U.S. Navy Wreck No. 1322. Clearance depths range from 0 to 9 ft. shallower than charted hydrography within the search radius. In general, coverage is within 3 to 5 feet of the charted bottom. As the criteria for disapproval has not been met, chart the Sunken Wreck with the <u>ED</u> notation and with a wire drag clearance of 26 ft. ^{Note:} The wreck is in an anchorage area.
Item 23-Dangerous Sunken Wreck, PD (barge with pontoon attached)	On Chart No. 494: Latitude 37°15.78' Longitude 76°11.26'	35 ft.	30 ft. (leadline)	38 ft.	Source: N. to M. No. 2 of 1950. See hang #51 in this tabulation for charting recommendations.
Item 25-Dangerous Sunken Wreck (30 ft. rep) (barge BERTIE loaded with steel)	On Chart No. 494: Latitude 37°18.66' Longitude 76°11.26'	40 ft.-estimated	35 ft. (leadline)	42 ft.	Source: N. to M. No. 15 of 1956 & N. to M. No. 19 of 1956. See hang #50 in this tabulation for charting recommendations.

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendation</u>
Item 53-Dangerous Sunken Wreck (Unknown)	On Chart No. 481: Latitude 36°57.01' Longitude 76°03.60'	Not located by H-9255	36 ft. by H-9255 38 ft. by FE-233	40 ft.	Source: N. to M. No. 33 of 1970. Clearance depths range from 1 to 5 feet shallower than charted hydrography within the search radius. In general, coverage is within 3 to 4 feet of the charted bottom. As the criteria for disposal has not been met, retain as charted the <u>Sunken Wreck</u> with the <u>ED</u> notation and with a <u>wire drag</u> clearance of 36 ft. ✓

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<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted Hydro Survey Depths</u>	<u>Charting Recommendation</u>
Item 54-Sunken Wreck, PA (24 ft. boat)	Charted Latitude 36°56.26' Longitude 76°06.32'	Not located by H-9255	24 ft.	27 ft.	Source: N. to M. No. 36 of 1966. Clearance depths range from 2 to 5 feet shoaler than charted hydrography within the search radius. In general coverage is within 3-4 feet of the charted bottom. As the criteria for disapproval has not been met, retain as charted the Sunken Wreck with the ED notation and with a wire drag clearance of 24 ft. The possibility exists that hang #28 is this wreck, refer to hang #28 in this tabulation.
Item 54D-Submerged Obstruction (unknown)	Charted Latitude 36°54.80' Longitude 76°05.42'		5 ft. (headline)	7 ft.	Source: Reported to A.M.C. by the U.S. Army Corps of Engineers. See item #23 in this tabulation for charting recommendations.
Item 55-Dangerous Sunken Wreck (31 ft. rep) (110 ft. derelict vessel)	On Chart No. 481: Latitude 37°00.77' Longitude 76°03.20'			43 ft.	Source: L.N. to M. No. 36 and L.N. to M. No. 40 of 1970. Data not processed- Wreck removed, L.N. to M. No. 6 of 1973 (2/6/73). Remove the wreck from the chart.

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Rang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted Hydro Survey Depths</u>	<u>Charting Recommendation</u>
Item 56-Dangerous Wreck, PA (22 ft. cabin cruiser)	On Chart No. 481: Latitude 36°57.30' Longitude 76°10.80'	Not located by H-9255	18 ft.-insufficient overlap 17 ft.-valid clearance	21 ft.	Source: N to M. No. 30 of 1966. Clearance depths range from 0 to 4 ft. shoaler than charted hydrography within the search radius. A large split exists within the area of the search radius. As the criteria for disapproval has not been met, retain as charted the Sunken Wreck with the ED notation and with a wire drag clearance of 17 ft.
Item 56-E Dangerous Sunken Wreck, PD (36 ft. barge with pile driver)	On Chart No. 481: Latitude 36°55.92' Longitude 76°09.48'	Not located by H-9255	16 ft. by H-9255 16 ft. by FE-233	21 ft.	Source: L.N. to M. No. 1 of 1972. Clearance depths range from 2 ft. deeper to 5 ft. shoaler than charted hydrography within the search radius. In general, coverage is within 3 to 4 ft. of the charted bottom. As the criteria for disapproval has not been met, retain as charted the Sunken Wreck with the ED notation and with a wire drag clearance of 16 ft.

Location Wreck No. 56-D (M. No. 30)

Location Wreck No. 56-E (M. No. 1) is in the bottom area of the chart. It is a barge with a pile driver. It is a large wreck and is a danger to navigation. It is a large wreck and is a danger to navigation.

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<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted Hydro Survey Depths</u>	<u>Charting Recommendation</u>
Item 64 - 42-foot sounding, Wrecks, PA (wrecks or wreckage uncovered by dredging)	On Chart No. 400: Latitude 36°58.02' Longitude 76°20.31'	Not located by H-9255	No valid clearance	45 ft.	Source: Corps of Engineers Survey BP-74578(1967-68). Retain as charted the 42-foot sounding, Wrecks, PA.

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendations</u>
Item 64A-Submerged Obstruction (unknown) <i>See attach-ment V in D.R. of 1971</i>	On Chart No. 400: Reported Latitude 36°57.81' Longitude 76°20.38'	42 ft.-estimated	36 ft.	44 ft.	Source: Unknown-item assigned by A.M.C. See hang #57 tabulation for charting recommendations.
Item E-Sunken Wreck (9-ft. rep) (36-foot boat)	On Chart No. 452: Latitude 36°51.14' Longitude 76°18.11'	Not located by H-9255		21 ft.	Source: N. to M. No. 15 of 1961. See Item E, Attachment V of the 1971 Descriptive Report for remarks and charting recommendations.

OTHER CHARTED FEATURES

Obstruction (18-ft. rep.) (unknown)	On Chart No. 481: Latitude 36°57.03' Longitude 76°10.68'	Not located by H-9255	No Valid clearance	21 ft.	Source: Unknown The possibility exists that this obstruction is hang #45 of this tabulation, however as the source is presently unknown, recommend the obstruction remain as charted unless subsequent information indicates otherwise.
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<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendation</u>
23-foot Sounding-Obstruction (unknown)	On Chart No. 481: Latitude 36°56.47' Longitude 76°09.83'	Not located by H-9255	23 ft.-insufficient overlap	26 ft.	Source: Unknown The possibility exists that this Obstruction originated from mis-plotted advanced field information from FE-233WD on the Temporary Hang on cargo lost during transfer between Navy ships at Latitude 36°56.52', Longitude 76°09.98'. However being in an anchorage area with the source presently unknown, recommend the obstruction remain as charted unless subsequent information indicates otherwise.
Obstruction reported (3ft.x3ft. concrete block) Item 1 on FE-233WD	On Chart No. 481: Latitude 36°55.80' Longitude 76°09.56'	Not located by H-9255	15 ft.-insufficient overlap	17 ft.	Source: Unknown. The probability is that the Obstruction is hang #36 (2ft.x4ft.x4ft. concrete clump) of this tabulation.

Consider indicating with a danger curve. This chart may not. Area is used for marine amphibious training and information is available concerning this as additional possible danger.

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendation</u>
<u>ITEMS LOCATED BY JUNCTIONAL SURVEY FE-233WD (1969)</u>					
Temporary Hang (uninvestigated)	Latitude 36°57'09.8" Longitude 76°03'18.1"	38 ft.-estimated- by FE-233WD Not located by H-9255	38 ft. by FE-233WD 36 ft. by H-9255	41 ft.	Chart a Submerged Obstruction in conjunction with hang #7 of this tabulation with a wire drag clearance of 38 ft. This temporary hang is possibly the same obstruction as hang #7.
Hang (uninvestigated-possible hang on bottom)	Latitude 36°57'00.7" Longitude 76°03'42.1"	38 ft. by FE-233WD Not located by H-9255	35 ft. by FE-233WD 36 ft. by H-9255- insufficient overlap 35 ft. by H-9255- valid clearance	41 ft.	See section 5. of the Verification Report for FE-233 WD (1969).
Hang (uninvestigated)	Latitude 36°57'44.0" Longitude 76°05'18.2"	34 ft. by FE-233WD Not located by H-9255	Not cleared by FE-233WD 30 ft. by H-9255	38 ft.	Chart a Submerged Obstruction with a wire drag clearance of 30 ft.
Temporary Hang (uninvestigated)	Latitude 36°55'51.7" Longitude 76°08'44.7"	19 ft. by FE-233WD Not located by H-9255	18 ft. by FE-233WD 15 ft. by H-9255	21 ft.	See Section 5. of the Verification Report for FE-233 WD (1969). <i>chart-1B</i>
Hang (rbck)	Latitude 36°55'56.5" Longitude 76°09'03.5"	19 ft.-estimate- by FE-233WD 17 ft. by H-9255.	19 ft. by FE-233WD not valid	23 ft.	See Hang #32 of this tabulation for charting recommendations. <i>chart-1B</i>

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendation</u>
✓ Hang (uninvestigated)	Latitude 36°55'48.8" Longitude 76°09'28.7"	15 ft. by FE-233WD Net Not located by H-9255.	14 ft. by FE-233WD 12 ft. by H-9255	17 ft.	See Section 5 of the Verifi- cation Report for FE-233 WD (1969). (a.) and (g), item e)
✓ Hang (debris-150 ft. of wire cable recovered off bottom)	Latitude 36°55'52.6" Longitude 76°09'35.6"	16 ft.-estimated- by FE-233WD Not located by H-9255	15 ft. by FE-233WD 15 ft. by H-9255	18 ft.	Chart in conjunction with hangs #35 & 36 of this tabulation as one Submerged Obstruction with a wire drag clearance 15 ft.

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendation</u>
Grounding	Latitude 36°56'09.9" Longitude 76°09'54.4"	22 ft. by FE-233WD Not located by H-9255	21 ft. by FE-233WD 19 ft. by H-9255	27 ft.	See Section 5 of the Verification Report of FE-233 WD (1969).
Temporary Hang (obstruction-cargo lost during transfer between Navy Ships)	Latitude 36°56'31.0" Longitude 76°09'58.4"	22 ft. by FE-233WD Not located by H-9255	21 ft. by FE-233WD Not cleared by H-9255	26 ft.	See section 5 of the Verification Report for FE-233 WD (1969).
Hang (uninvestigated-possible hang on bottom)	Latitude 36°55'54.4" Longitude 76°10'04.2"	16 ft.-estimated- by FE-233WD. Not located by H-9255.	15 ft. by FE-233WD 17 ft. by H-9255 <i>estimated hang of 16 ft on FE233 is disproved by 17ft clearance on this survey. Do not Chart</i>	18 ft.	See Section 5 of the Verification Report for FE-233 WD.
Temporary Hang (fish net)	Latitude 36°55'53.1" Longitude 76°10'08.4"	15 ft. by FE-233WD Not located by H-9255	14 ft. by FE-233WD 14 ft. by H-9255	17 ft.	See Section 5 of the Verification Report for FE-233 WD (1969).
<u>ITEMS LOCATED BY THE PRESENT SURVEY-H-9255WD</u>					
#1 - Hang (old anchor)	Latitude 36°56'42.5" Longitude 76°03'09.5"	39 ft.	37 ft.	40 ft.	Obstruction removed-do not chart.
#2 - Hang (concrete clump anchor-extends 4 ft. off bottom)	Latitude 36°56'43.7" Longitude 76°03'11.4"	38 ft.-estimated	37 ft.	40 ft.	Chart a Submerged Obstruction with a wire drag clearance of 37 ft.
#3 - Hang (uninvestigated)	Latitude 36°56'41.8" Longitude 76°03'12.8"	34 ft.	34 ft.	39 ft.	Chart a Submerged Obstruction with a wire drag clearance of 34 ft.

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Item Description	Geographic Position	Minimum Hang or Grounding Depth	Maximum Clearance or Minimum Sounding	Chart or Hydro Survey Depths	Charting Recommendation
✓ #4 - Hang (scrap metal extends 1 1/2 ft. off bottom)	Latitude 36°56'44.8" Longitude 76°03'12.8"	37 ft.	34 ft. <i>is this item worth charting?</i>	40 ft.	Chart a Submerged Obstruction with a wire drag clearance of 34 ft. <i>37 hang minus 1/2 ft = 35 ft if charted - 35 cast or 24 obstr</i>
✓ #5 - Hang (scrap metal - extends 1/2 ft. off bottom)	Latitude 36°56'42.4" Longitude 76°03'16.3"	34 ft.	34 ft.	39 ft.	Chart a Submerged Obstruction with a wire drag clearance of 34 ft.
✓ #6 - Hang (Navy buoy)	Latitude 36°56'39.6" Longitude 76°03'16.6"	N/A	34 ft.	36 ft.	Buoy was hung in 1971 but was absent and the area cleared in 1972. Chart in accordance with the most current floating aids information.
✓ #7 - Hang (old anchor - extends 2 ft. off bottom)	Latitude 36°57'09.8" Longitude 76°03'18.5"	43 ft. - estimated	36 ft. by H-9255 38 ft. by FE-233WD	42 ft.	Chart in conjunction with the Temporary Hang at Latitude 36°57'09.8", Longitude 76°03'18.1" on FE-233WD, as one Submerged Obstruction with a wire drag clearance of 38 ft.
✓ #8 - Hang (mooring buoy)	Latitude 36°56'50.8" Longitude 76°03'18.9"	N/A	36 ft. - one direction only	42 ft.	Buoy was hung in 1972 but was absent and the area cleared in 1971. Chart in accordance with the most current floating aids information.

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Chart or Hydro Survey Depths</u>	<u>Charting Recommendation</u>
#9 - Hang (uninvestigated)	Latitude 36°56'34.3" Longitude 76°03'19.0"	34 ft.	34 ft.	36 ft.	Chart a <u>Submerged Obstruction</u> with a wire drag
#10 - Hang (uninvestigated)	Latitude 36°56'56.1" Longitude 76°03'27.0"	39 ft.	36 ft. by H-9255 38 ft. by FE-233- insufficient overlap	41 ft.	Chart a <u>Submerged Obstruction</u> with a wire drag clearance of 36 ft.
#11 - Hang (aluminum clump- 8 ft. x 8 ft. x 1 ft.-airplane wing)	Latitude 36°56'27.6" Longitude 76°03'27.2"	33 ft.	30 ft.	33 ft.	See attachment V of the Descriptive Report H-9255WD, 1972. <i>Nothing moves along the bottom with the current. Do not chart</i> 1/25/88 JRS
#12 - Temporary Hang (uninvestigated)	Latitude 36°56'34.3" Longitude 76°03'41.2"	31 ft.	30 ft.	32 ft.	Chart a <u>Submerged Obstruction</u> with a wire drag clearance of 30 ft.
#13 - Hang (B&W buoy "C3")	Latitude 36°55'38.4" Longitude 76°03'45.0"	N/A	N/A	30 ft.	Chart in accordance with the most current floating aids information.
#14 - Hang (metal clump- 4 ft. x 4 ft. extends 3 ft. off bottom).	Latitude 36°57'17.6" Longitude 76°03'48.0"	38 ft.	36 ft. (leadline) by H-9255 36 ft. by FE-233	40 ft.	Chart a <u>Submerged Obstruction</u> with a least depth of 36 ft. 5/6/88 JRS
#15 - Hang (mud hang on bottom).	Latitude 36°57'00.7" Longitude 76°03'55.2"	38 ft.	35 ft.	39 ft.	Do not chart.

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendations</u>
#16 - Hang (anchor - extends 4 ft. off bottom).	Latitude 36°56'21.7" Longitude 76°03'58.0"	25 ft.	26 ft. (valid-clearance after removal)	28 ft.	Obstruction removed-do not chart.
#17 - Temporary Hang (uninvestigated)	Latitude 36°56'20.1" Longitude 76°04'26.7"	24 ft.	22 ft.	26 ft.	Chart a <u>Submerged Obstruction</u> with a wire drag clearance of 22 ft.
#18 - Hang (uninvestigated mud hang)	Latitude 36°57'09.8" Longitude 76°04'37.2"	35 ft.	32 ft.	36 ft.	Do not chart. <i>Grounding of 35 ft. will be in charted depths of 2 to 25 ft. should be charted 1966-718</i>
#19 - Hang (iron pipe-1 ft. in diameter-extends 4 ft. off bottom).	Latitude 36°57'47.0" Longitude 76°04'41.5"	35 ft. - estimated	not cleared <i>estimated hang 35' projects off to 40-4' 31A</i>	43 ft.	Chart a <u>Submerged Obstruction</u> . <i>safest way to chart</i> <i>Obst (31A ref 1971)</i>
#20 - Hang (mud hang on bottom).	Latitude 36°56'59.6" Longitude 76°04'59.3"	30 ft.	30 ft.	31 ft.	Do not chart.
#21 - Hang (old anchor-extends 2 ft. off bottom).	Latitude 36°55'55.2" Longitude 76°05'03.3"	24 ft. - 2 ft. extend off bottom <i>22 ft. - safest way to chart</i>	Not cleared <i>Not cleared</i>	29 ft.	Chart a <u>Submerged Obstruction</u> . <i>Obst (22 ft ref 1971)</i> <i>safest way to chart</i>
#22 - Hang (iron pipe-1 ft. in diameter extends 8 ft. off bottom).	Latitude 36°57'37.8" Longitude 76°05'22.0"	31 ft.	31 ft. (Leadline)	37 ft.	Chart a <u>Submerged Obstruction</u> with a least depth of 31 ft. <i>Obst</i>

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendation</u>
#23 - Detached Position (wreck of an armed sailing vessel).	Latitude 36°54'49.9" Longitude 76°05'23.8"	N/A	5 ft. (Leadline)	7 ft.	Chart a <u>Sunken Wreck</u> with a least depth of 5 ft.
#24 - Temporary Hang (uninvestigated-grapnel hook recovered on ground wire).	Latitude 36°57'16.8" Longitude 76°05'35.2"	32 ft.	Not cleared	33 ft.	Chart a <u>Submerged Obstruction</u> .
#25 - Hang (pipe-1 ft. in diameter-extends 4 inches off bottom).	Latitude 36°57'03.7" Longitude 76°05'38.9"	26 ft.	19 ft.-one direction	26 ft. only	<i>Do not chart a grapnel hook that has been recovered 8/25/88 JPS</i> Chart a <u>Submerged Obstruction</u> with a wire drag clearance of 19 ft.
#26 - Hang (B&W buoy "C7")	Latitude 36°55'49.3" Longitude 76°06'08.5"	N/A	N/A	28 ft.	Chart in accordance with the most current floating aids information.
#27 - Hang (hang on bottom)	Latitude 36°56'49.1" Longitude 76°06'37.0"	22 ft.	Not cleared	25 ft.	Do not chart.
#28 - Hang (wreck of a steel vessel)	Latitude 35°55'50.0" Longitude 76°06'44.3"	20 ft. - estimated	18 ft.-one direction only	25 ft. <i>do not chart 1/25/88 JPS</i>	Chart a <u>Sunken Wreck</u> with a wire drag clearance of 18 ft. The possibility exists that this hang is item 54, Sunken Wreck, PA.
#29 - Hang (1971) (old anchor-8 ft. in length). <i>not plotted on map sheet</i>	Latitude 36°56'07.8" Longitude 76°06'52.0"	25 ft. - estimated	24 ft.	31 ft.	Obstruction removed-do not chart.

Hydrographer noted in D.R. that this item has deteriorated so much that it presents no danger to navigation & should not be charted

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendation</u>
#30 - Hang (uninvestigated)	Latitude 36°55'52.5" Longitude 76°08'36.1"	18 ft.	15 ft. by H-9255 18 ft. by FE-233WD	21 ft.	Chart a <u>Submerged Obstruction</u> with a wire drag clearance of 15 ft. ✓
#31 - Hang (scrap metal - extends 2 ft. off bottom)	Latitude 36°55'55.0" Longitude 76°08'59.3"	17 ft.	17 ft. by H-9255 19 ft. by FE-233WD not valid	22 ft.	Chart a <u>Submerged Obstruction</u> with a wire drag clearance of 17 ft. ✓
#32 - Hang (concrete clump - extends 6 ft. off bottom - identified as a rock on FE-233WD)	Latitude 36°55'56.5" Longitude 76°09'03.5" (See page 16)	17 ft.	17 ft. by H-9255 19 ft. by FE-233WD (not valid - superseded by pres. WD)	23 ft.	Chart a <u>Submerged Obstruction</u> with a wire drag clearance of 17 ft. ✓
#33 - Hang (tractor tread - extends 1 ft. off bottom)	Latitude 36°55'49.8" Longitude 76°09'31.4"	15 ft. <i>hang at 15 ft. protrudes 1 ft off bottom, therefore it should be no less than 14 ft.</i>	12 ft. by H-9255 15 ft. by FE-233WD <i>is this hang worth charting?</i>	18 ft. <i>(6 cleared, available) 140bst</i>	Chart a <u>Submerged Obstruction</u> with a wire drag clearance of 12 feet. <i>desired to chart compiler for charting resolution</i> ✓
#34 - Hang (mushroom anchor - extends 3 ft. off bottom)	Latitude 36°55'58.8" Longitude 76°09'33.3"	19 ft.	19 ft. (leadline) by H-9255 19 ft. by FE-233WD	22 ft.	Chart a <u>Submerged Obstruction</u> with a least depth of 19 ft. <i>190bst</i> ✓

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendations</u>
#35 - Hang (mushroom anchor extends 4 ft. off bottom).	Latitude 36°55'52.8" Longitude 76°09'34.6"	18 ft. - estimated	18 ft. (leadline) by H-9255 15 ft. FE-233WD	19 ft.	Chart in conjunction with the hang of debris-wire cable, at Latitude 36°55'52.6", Longitude 76°09'35.6" on FE-233WD as one Submerged Obstruction with a wire drag clearance of 15 ft.
#36 - Hang (concrete clump - 2 ft. x 4 ft. x 4 ft. - extends 2 ft. off bottom).	Latitude 36°55'52.9" Longitude 76°09'35.4"	20 ft. - estimated	15 ft. by H-9255 15 ft. by FE-233WD	19 ft.	Chart in conjunction with the hang of debris-wire cable at Latitude 36°55'52.6", Longitude 76°09'35.6" on FE-233WD as one Submerged Obstruction with a wire drag clearance of 15 ft.
#37 - Hang (anchor-extends 1½ ft. off bottom).	Latitude 36°56'19.1" Longitude 76°09'38.3"	21 ft.	21 ft. by H-9255 23 ft. by FE-233WD <i>not valid is superseded by pres. survey 21ft</i>	26 ft.	Chart a Submerged Obstruction with a wire drag clearance of 21 ft.
#38 - Hang (uninvestigated)	Latitude 36°55'51.8" Longitude 76°09'45.1"	15 ft. - estimated	15 ft. by H-9255 15 ft. by FE-233WD	17 ft.	Chart a Submerged Obstruction with a wire drag clearance of 15 ft.

See notes This area is excluded by [unclear] [unclear]

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendation</u>
#39 - Hang (sections of railroad track extends 4 1/2 ft. off bottom).	Latitude 36°57'17.7" Longitude 76°09'46.5"	19 ft.	18 ft. (leadline)	22 ft.	Chart a Submerged Obstruction with a least depth of 18 ft. <i>18 Obsta</i>
#40 - Hang (uninvestigated).	Latitude 36°55'49.7" Longitude 76°09'51.5"	15 ft. - estimated	14 ft. by H-9255 15 ft. by FE-233	17 ft.	Chart a Submerged Obstruction with a wire drag clearance of 14 feet. <i>14 Obsta</i>
#41 - Hang (steel accommodation ladder-30 ft. x 3 ft.-extends 2 ft. off bottom).	Latitude 36°57'13.8" Longitude 76°10'10.5"	19 ft. - estimated	18 ft.	21 ft.	Obstruction removed-do not chart. <i>Not plotted on ASD sheet</i>
#42 - Hang (Tripod shaped piping-extends 2 ft. off bottom).	Latitude 36°57'32.2" Longitude 76°10'21.4"	17 ft.	18 ft. (valid clearance-after removal)-one direction only	22 ft.	Obstruction removed-do not chart. <i>Not plotted on ASD sheet</i>
#43 - Hang (B&W Buoy N "C13").	Latitude 36°58'06.5" Longitude 76°10'34.1"	N/A	N/A	24 ft.	Chart in accordance with the most current floating aids information.
#44 - Hang (concrete block-2 ft. x 2 ft. x 2 ft.)	Latitude 36°57'42.9" Longitude 76°10'39.8"	19 ft. - estimated	19 ft. (leadline)	22 ft.	Chart a Submerged Obstruction with a least depth of 19 ft. <i>19 Obsta</i>

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendation</u>
#45 - Hang (aircraft engine and attached anchor-extends 5 ft. off bottom).	Latitude 36°57'00.4" Longitude 76°10'44.7"	20 ft.	17 ft. (leadline)	21 ft.	Obstruction removed-do not chart. <i>Not plotted on A&D sheet</i>
#46 - Hang (B&W buoy BELL "LC").	Latitude 36°56'59.6" Longitude 76°10'44.7"	N/A	N/A	21 ft.	Chart in accordance with the most current floating aids information.
#47 - Hang (steel post-extends 1-ft. off bottom).	Latitude 36°57'05.6" Longitude 76°11'42.8"	20 ft.-estimated	20 ft.-one direction only <i>Post (with rep 1971)? clearance in one direction only</i>	20 ft.	Chart a Submerged Obstruction with a wire drag clearance of 20 ft. <i>Is this worth charting? 8/26/85 JPS</i>
#48 - Hang (anchor-extends 3 ft. off bottom). <i>Chart: 25A on pg 18 in 1971 BRK</i>	Latitude 37°18'57.5" Longitude 76°10'10.0" (position approximate)	36 ft. hang - 3 ft. off bottom	Not cleared <i>33 ft - Shaldest it could be</i>	35 ft.	Chart a Submerged Obstruction, PA. (33 ft rep 1971) <i>chart with label 1/26/85 JPS</i>
#49 - Hang (steel cylinder 6 ft. in diameter, 40 ft. long with numerous angle iron protrusions-extends (1-ft) off bottom). <i>note on A&D sheet is eleven (11) feet off bottom.</i>	Latitude 37°16'34.1" Longitude 76°10'49.5"	36 ft.-estimated	30 ft. (leadline) (predicted tides)	40 ft.	Chart a Submerged Obstruction with a least depth of 30 ft. <i>Obstr. (30 ft rep 1971) reflects predicted tide</i>
#50 - Hang (barge BERTIE-Loaded with steel).	Latitude 37°18'41.7" Longitude 76°11'13.7"	40 ft.-estimated	35 ft. (leadline)	42 ft.	Chart a Sunken Wreck with a least depth of 35 ft.

<u>Item Description</u>	<u>Geographic Position</u>	<u>Minimum Hang or Grounding Depth</u>	<u>Maximum Clearance or Minimum Sounding</u>	<u>Charted or Hydro Survey Depths</u>	<u>Charting Recommendation</u>
#51 - Hang (barge with attached pantoon)	Latitude 37°16'19.0" Longitude 76°11'32.7"	35 ft.	30 ft. (leadline- based on predicted tides)	39 ft.	Chart a Sunken Wreck with a reported least depth of 30 ft. ^(30 ft. rep 1971)
#52 - Hang (cargo ship DRUID HILL-extends 7 ft. off bottom)	Latitude 37°02'27.4" Longitude 76°14'28.8"	12 ft.	12 ft. (leadline)	16 ft.	Chart a Sunken Wreck with ^{2/26/85} a least depth of 12 ft.

b. Aids to Navigation

All floating aids located by the present survey are addressed in the tabulation in paragraph a. of this section. Eight fixed aids to navigation were used for calibration/control stations. The following fixed aids to navigation are published triangulation stations and fall within the limits of the smooth sheet (A&D):

Little Creek Harbor Jetty Light 1
(LITTLE CREEK, 1929)
Little Creek Harbor Jetty Light 2
(JETTY, 1929)
Thimble Shoal Light
(THIMBLE SHOAL LIGHTHOUSE, 1919)

The following fixed aids to navigation are published triangulation stations and do not fall within the limits of the smooth sheet (A&D):

Old Point Comfort Light
(OLD POINT COMFORT LIGHTHOUSE, 1866)
Cape Henry Light
(CAPE HENRY LIGHTHOUSE, 1887)
York Spit Light
(YORK SPIT LIGHTHOUSE, 1900)
Newport News Middle Ground Light
(NEWPORT NEWS MIDDLE GROUND LIGHTHOUSE, 1903)

Thimble Shoal Tunnel South Daybeacon (CALIBRATION BEACON, 1971) is not a published triangulation station and falls within the limits of the smooth sheet (A&D).

All of the previously mentioned fixed aids to navigation are listed in the 1971 and 1972 editions of the U.S. Coast Guard Light List, Volume 1 and are listed in the survey control list.

6. CONDITION OF SURVEY

The condition of the survey is satisfactory except as noted in other sections of this report and as follows:

a. Field Work and Records

- 1) Bottom clearances for assigned items investigated, numbers 13, 14, 53, 56 and 56E were not adequate for disapproval but are considered good considering bottom topography, currents, traffic, and other constraints affecting wire drag operations.
- 2) Four splits exist in this survey. These splits are:
 - a) in the vicinity of Latitude $36^{\circ}56'10''$, Longitude $76^{\circ}05'03''$
 - b) in the vicinity of Latitude $36^{\circ}55'58''$, Longitude $76^{\circ}05'04''$

c) in the vicinity of Latitude 36°55'46", Longitude 76°06'10"

d) in the vicinity of Latitude 36°57'10", Longitude 76°11'00"

3) One area of insufficient overlap exists in the vicinity of Latitude 36°56.6', Longitude 76°02.2'.

4) Twelve of the fifty-eight hangs encountered on this survey were not investigated.

5) Five hangs were neither cleared nor were least depths obtained.

6) Six hangs, without least depths, were cleared in only one direction.

7) Lift tests in both 1971 and 1972 were inadequate and substandard. In the 1971 data 19 of the 34 strips contained sections not tested, 11 strips had TOB tests as the only test in a section, and only one strip had all sections tested more than once. In the 1972 data 26 of the 43 strips contained sections not tested, 19 strips had TOB tests as the only test in a section, and no strips had all sections tested more than once.

8) Daily Journals were written for 8 of the 23 days of the 1971 data and 15 of the 23 days of the 1972 data. The Daily Journals written were generally inadequate and were of little value.

9) The least depth obtained on the barge with attached pontoon (hang #51 in the tabulation in Section 5.a, of this report) is based on predicted tides. The least depth recorded in the survey records is a corrected predicted tides value. The predicted tide applied, the raw leadline, and the time of acquisition was not recorded.

10) In strip Y-1 (1972) the uprights were set as to contain a deep section between two shoaler adjacent sections which is a violation of section 3-20 of the Wire Drag Manual.

11) No survey data of the 1971 portion of this survey was logged for entry into an automated system. All 1971 data required plotting by hand during processing.

12) No charts used by the field units were included with the survey records.

b. Descriptive Reports

1) Numerous conflicts existed between the Descriptive Reports and the survey records. These conflicts were addressed during verification.

2) Prior surveys within the common areas were not identified nor were any comparisons made with the prior surveys.

3) Charts affected by this survey were not identified by chart number, edition number, and edition date. Comparisons made by the hydrographer between charted data and the present survey are inadequate and not in conformance with the Wire Drag Manual.

4) Control stations listed in section C, and Attachment 1 (1971) required the correction of establishment dates for 4 stations, correction of 8 station names, and the addition of the geographic position for 21 stations. Seven stations listed could not be verified. Three stations used for control were not listed.

5) Control stations listed in Section C. and Attachment 1 (1972) required the correction of establishment dates for 2 stations, correction of 5 station names, and the addition of the geographic position for 14 stations. Four stations listed could not be verified.

6) No abstract of electronic pattern correctors was found in the 1971 Descriptive Report. The survey records contained a Calibration Report for the Project for 1971. This report was not referenced in the Descriptive Report.

7) The lists of Groundings and Hangs, Section IV (1971) and section III (1972) are inaccurate and incomplete. Refer to the tabulation in Section 5.a of this report for complete information on groundings and hangs.

8) Fifteen hangs occurring in the 1971 data were not addressed in Attachment V-Item Investigations (1971).

9) Eighteen hangs occurring in the 1972 data were not addressed in Attachment V-Item Investigations (1972).

10) The Floating Aids to Navigation List (1971) was not complete. The Navy buoy hung in 1971 was not listed.

11) A Geographic Names List was compiled during verification and is included in the Descriptive Reports.

12) A Nonfloating Aids or Landmarks for Charts List (Form 76-40) was completed during verification and is included in the Descriptive Report.

13) Necessary corrections made by the evaluator to the Descriptive Reports are denoted in red ink.

C. Field Plotting

Field plotting consisted of pencil plots on tracing paper for individual strips and A&D tracings for an item or group of items. Although this is not in accordance with the Wire Drag Manual, it is considered adequate.

7. Compliance with Project Instructions

This wire drag survey adequately complies with Project Instructions OPR-467-R/H-71, Wire Drag Investigations, Chesapeake Bay, Virginia, dated January 28, 1971 and amended by Change No. 1 dated February 5, 1971 and Project Instructions OPR-467-R/H-72, Wire Drag Investigations, Chesapeake Bay, Virginia, dated January 26, 1972 and amended by Change No. 1 dated January 27, 1972 except as noted in this report.

8. Additional Field Work

This is an adequate basic wire drag survey for items 8, 9, 13, 14, 23, 25, 53, 54, 54D, 56, 56E, 64A and item E except as noted in this report. Six hangs without clearance depths or least depths exist on the present survey. Four of these hangs were diver identified. The two remaining hangs are of little consequence as one was a temporary hang within one foot of the bottom and the other is in a maintained channel/-maneuvering area which has probably been dredged since this survey. Therefore no additional field work is recommended on any items located by the present survey. Additional field work is recommended on the following prior data:

a. The 43-foot grounding from H-7028WD (1945) in Latitude $36^{\circ}56'42.5''$, Longitude $76^{\circ}02'04.8''$. Data from prior (H-7750) and present (H-9814) hydrographic surveys show no indication of a shoal in the vicinity. The possibility exists that a sloping wreck or obstruction caused the grounding.

b. The 19-foot hang (cleared by 16 feet) from H-7028WD (1945) in Latitude $36^{\circ}55'32.8''$, Longitude $76^{\circ}04'04.2''$ had a clearance of 23 feet by the present survey. This clearance is not valid due to insufficient overlap and clearance in only one direction. The present survey does indicate that a deeper than charted clearance may be obtainable over this obstruction.

c. The 15-foot hang (cleared by 15 feet) from H-7177WD (1947-48) in Latitude $36^{\circ}57'19.5''$, Longitude $76^{\circ}09'48.4''$ was not located or cleared by the present survey. However this charted obstruction is in close proximity to a present survey hang on sections of railroad track with a least depth of 18 feet (See hang #39 in the tabulation in section 5.a of this report) and the possibility exists that these hangs are the same obstruction. Additional work would be necessary to determine if only one or two separate obstructions exists.

9. Special Considerations

a. The majority of this survey is in the anchorage areas of Lynnhaven Roads and off Little Creek. These anchorages are subject to being littered with debris which can pose significant hazards to navigation. Effective depths obtained over these areas are of questionable value as this survey was processed in 1982 and 1983. The wrecks and obstructions located by this survey are still considered valid, however many additional obstructions may exist.

b. This survey is unusual in that it is the combination of two surveys (R/H-20-1-71 & R/H-20-1-72). H-9255 originally was only

R/H-20-1-71. Surveys H-9292WD (R/H-20-1-72) and H-9293WD (R/H-20-1-72) were a combined survey which was subsequently split and H-9292WD was recinded and R/H-20-1-72 was made a part of H-9255WD. H-9293WD (R/H-20-2-72) remains as a registered survey. These actions made processing difficult and cumbersome.

c. Three temporary hangs were encountered during this survey. These temporary hangs are positioned by using all available information pertaining to the hangs, however, the positions are not as accurate as a solid hang where numerous cuts for hang positioning are taken.

d. Numerous groundings occurred during this survey, however these groundings are not in conflict with charted and hydrographic survey depths and therefore are not smooth plotted. One grounding from junctional survey FE-233WD (1969) is smooth plotted.

e. Hangs on outset, pickup, or in void sections were smooth plotted with an estimated effective depth of hang. Thirteen hangs on this survey have estimated effective depths.

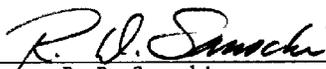
f. In strips containing a hang, the area past the initial contact of the hang was not claimed for effective depth coverage as the program of testing for lift is not considered sufficient to claim effective depths past the point of hang.

Maurice B. Hickson, III
Maurice B. Hickson, III
Cartographer
Evaluation and Analysis

INSPECTION REPORT
H-9255WD

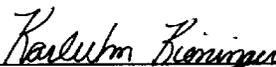
The completed survey has been inspected with regard to survey coverage, investigation of hangs and clearance depths, cartographic symbolization, and verification or disproof of charted data. The survey complies with National Ocean Service requirements except as noted in the Evaluation Report. The survey records comply with NOS requirements except where noted in the Evaluation Report.

Inspected



R. D. Sanocki

Chief, Hydrographic Survey Processing Section
Hydrographic Surveys Branch



Karl Wm. Kieninger, CIB, NOAA

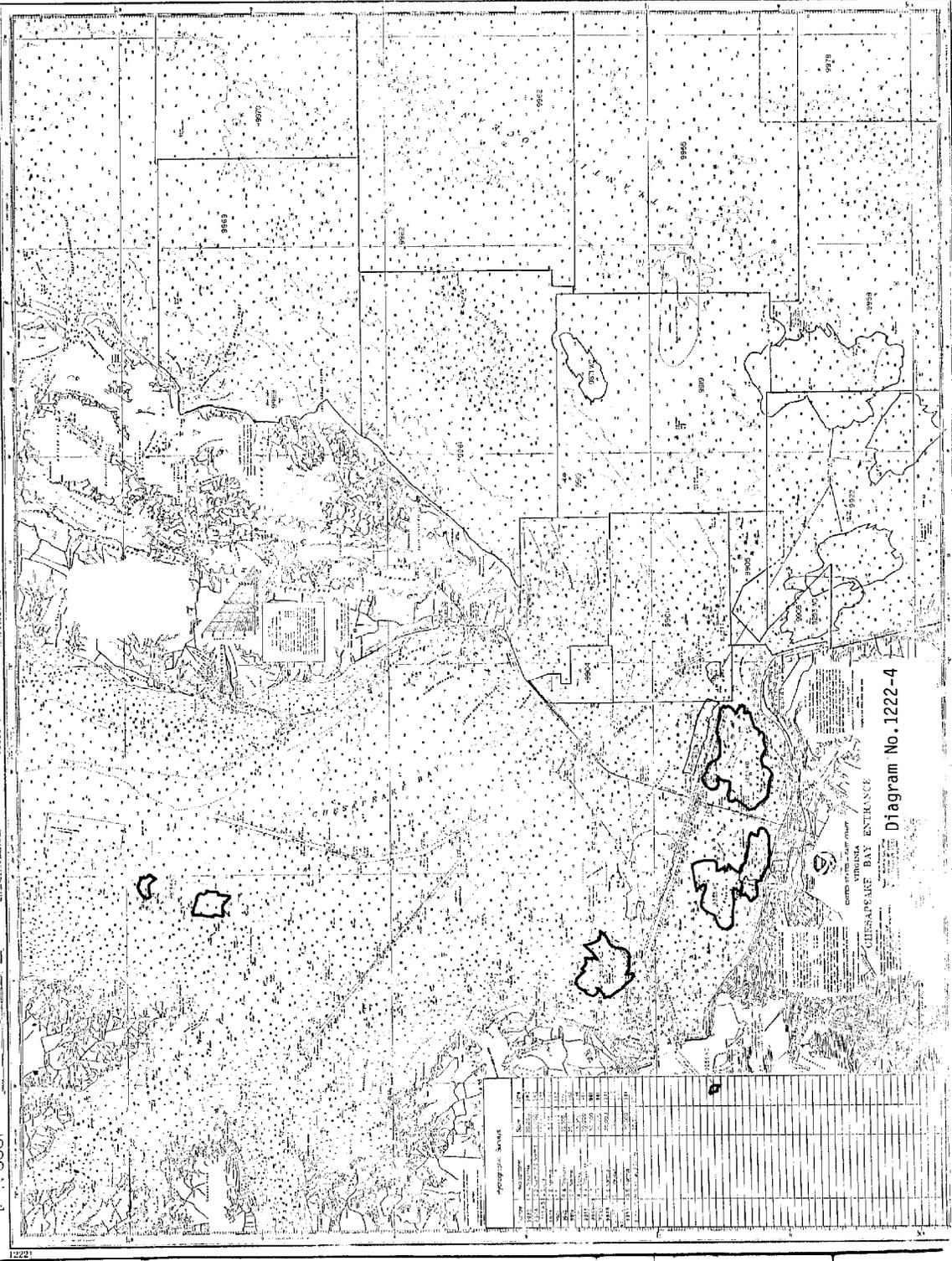
Chief, Hydrographic Surveys Branch

Approved February 24, 1984



Wesley V. Gull, RADM, NOAA

Director, Atlantic Marine Center



RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9255WD

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
12254	4-19-84	D. Wyke	Full Part Before After Verification Review Inspection Signed Via Drawing No. 54
12221	5-18-84	M. Sorpeira	Full Part Before After Verification Review Inspection Signed Via Drawing No. 81 REVISED ONE ITEM AT PROOF STAGE THROUGH 12254
12205A	5-18-84	M. Sorpeira	Full Part Before After Verification Review Inspection Signed Via Drawing No. REVISED ONE ITEM AT PROOF STAGE THROUGH 12254
12256	7-12-84	D.C. Harpene	Full Part Before After Verification Review Inspection Signed Via Drawing No. 6
12255	6-18-84	D.C. Harpene	Full Part Before After Verification Review Inspection Signed Via Drawing No. 15
12220	8-23-84	D.C. Harpene	Full Part Before After Verification Review Inspection Signed Via Drawing No. 51 Appd Critical Corrections
12221	10-1-85	A. Graham	Full Part Before After Verification Review Inspection Signed Via Drawing No. Prototype
12200	2-21-86	R. Bucht	Full Part Before After Verification Review Inspection Signed Via Drawing No. 50 FULL APPLICATION (1 SOUNDING FILE WITHIN LIMITS OF CHART)
12222	7-10-86	R. Kennedy	Full Part Before After Verification Review Inspection Signed Via Drawing No. 31 in full
12221	9-25-86	Russell Kennedy	Full Part Before After Verification Review Inspection Signed Via Drawing No. 33 in full
12238	2-26-88	H. Radden	Full After V&R and Inspection Drawing No. 40
12245	4-8-88	H. Radden	Full After V&R and Inspection Drawing No. 59
12224	1-3-89	E. Maiten	Full after V&R Inspection Aug # 19 ^{Review} 11/19/85 Rev. # (30 Apr) to 35 WK des # 48 23, 25 & NK to ^{partially supersede} 12221 by H-9254, H-9
12220	3-5-93	J. Barber	Full After V&R Aug #55, thru chart 12221 by H-9254, H-9