

10046

Diagrams 1220-2 & 1221-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey Hydrographic
Field No. MI-20-4-82
Office No. H-10046

LOCALITY

State Virginia
General Locality Atlantic Ocean
Locality Chincoteague Shoals

1982

CHIEF OF PARTY
CAPT. J.A. Yeager

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DATE February 7, 1985

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

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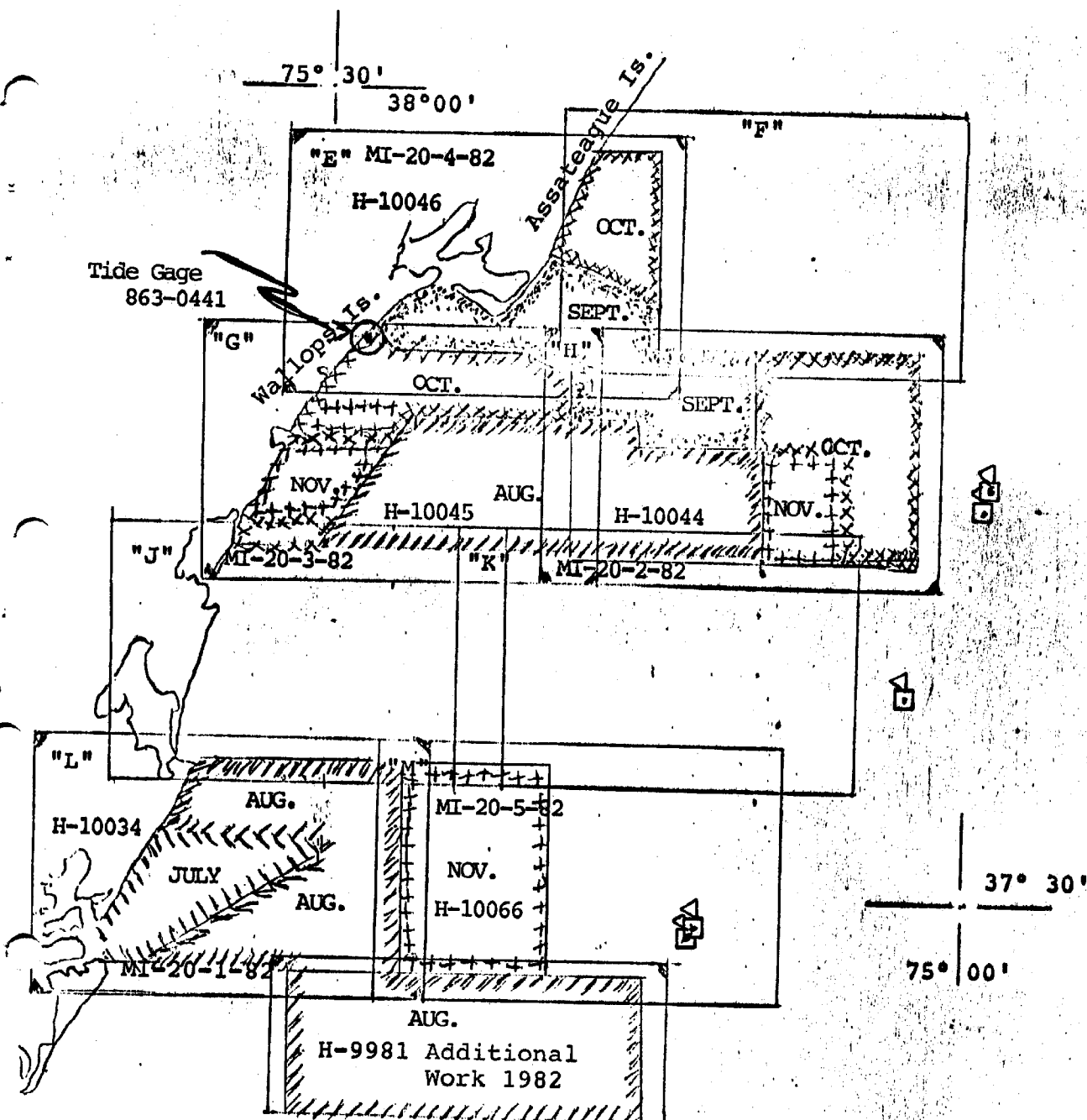
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SEE "Record of Application"



JULY	AUG.	SEPT.	OCT.	NOV.	
-	1856.3	525.0	467.8	725.2	LNM HYDRO (SHIP)
-	195.4	22.8	47.5	55.0	SNM HYDRO (SHIP)
268.6	587.6	265.1	563.8	222.7	LNM HYDRO (LAUNCH)
21	20	18	34.4	20.0	SNM HYDRO (LAUNCH)
54	47	36	53	21	BOTTOM SAMPLES
2	1	1	1	-	NANSEN CAST
-	784.7	221.9	324.8	396.6	MISC., NM (SHIP)
199.6	348.4	220.6	263.0	227.6	MISC., NM (LAUNCH)

OPR-D103-MI-82, ASAP
 PROGRESS SKETCH
 HYDROGRAPHIC OPERATIONS
 NOAA SHIP MT. MITCHELL S-222
 J. Austin Yeager, Capt., NOAA

NOAA FORM 77-28
(11-72)

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

HYDROGRAPHIC TITLE SHEET

REGISTER NO.

H-10046

FIELD NO.

MI-20-4-82

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

State Virginia

General locality Atlantic Ocean

Locality Chincoteague Shoals to Wallops Island

Scale 1:20,000

Date of survey 31 Aug. 1982 - 5 Nov. 1982

Instructions dated 5 May 1982

Project No. OPR-D103-MI-82

Vessel NOAA Ship MT. MITCHELL's LAUNCHES (Vesno 2224, 2225, 2226)

Chief of party J. Austin Yeager, Capt. NOAA

Surveyed by Commissioned Officers, NOAA Ship MT. MITCHELL (See remarks)

Soundings taken by echo sounder, hand lead, pole echo sounder

Graphic record scaled by RW, EM, CS, RC, UG, EM, MS

Graphic record checked by RW, EM, CS, RC, UG, EM, MS

XYNETICS 1201 PLOTTER (AMC)
Automated plot by Hydroplot

Protracted by

Verification by R. L. KEENE

Soundings in fathoms feet at MLW MLLW

REMARKS: LCDR L. A. LAPINE

LT E. S. VARNEY

LT P. M. THOMAS BRN

LT(jg) G. R. YATES

LT(jg) K. P. PETERS

LT(jg) F. W. ROSSMAN

ENS D. R. HENEGAR

ENS C. N. MCLEAN

ENS D. I. CREWS (OIC)

ENS J. A. MILLER

NOTES IN THE DESCRIPTIVE REPORT
WERE MADE IN RED DURING OFFICE
PROCESSING

AWOIS/SURE MAM 11/18/86

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** FILED WITH ORIGINAL FIELD RECORDS.*

DESCRIPTIVE REPORT
to Accompany
Survey H-10046
(Field No. M120-4-82
Scale 1:20,000 Year 1982
CAPT J. Austin Yeager, NOAA
Commanding
NOAA Ship MT MITCHELL

A. Project

This survey was carried out in accordance with Project Instructions OPR-DI03-MI-82 dated May 5, 1982 and amended by changes Number 1, 2 and ~~3~~; dated June 21, 1982, *AND* September 7, 1982, ^{*NOT APPLICABLE*} ~~and December 10, 1982~~ respectively.

B. Area Surveyed

The survey was conducted off the Eastern Shore of Virginia from Wallops Island, north ^{*Along*} ~~to~~ Assateague Island including the entrance to Chincoteague Inlet.

The survey area is characterized primarily by a gradually sloping bottom out from the shoreline. However, several isolated shoals and ridges exist within the survey area. The survey clearly defines the entrance channel. The approximate survey limits are described by the shoreline and lines connecting the following points in a counter-clockwise direction.

<u>Latitude (North)</u>	<u>Longitude (West)</u>
37-50-30	75-28-40
37-50-30	75-19-30
37-49-30	¹⁸⁻¹⁰ 75-17-50
⁴⁹⁻³⁰ 37-50-40	²⁰ 75-14-20
37-51-20	¹⁵⁻⁴⁵ 75-14-30
37-52-30	75-16-20
37-59-00	75-16-20

The survey was conducted from August 3⁰~~1~~², 1982 (JD24²~~1~~) to November 5, 1982 (JD309). The area north of Latitude 37-56-30 N was purposely run outside of the limits for sheet "E" in conjunction with this survey. The area drew the survey together with survey H-9796 run several years earlier, and filled a holiday on survey H-9796. The additional work is outlined on the standard sheets.

Two additional lines were run in the Chincoteague Inlet Entrance Channel, well beyond the normal survey limits. The two lines were run to assist to U.S. Coast Guard in determining if the channel was safe after the occurrence of a major storm.

C. Sounding Vessels

Soundings for this survey were obtained by launches from NOAA Ship MT MITCHELL (S-222). The launches used were Launch 1002 (VESNO 2224), and Launch ¹⁰¹²~~1004~~ (VESNO 2226). No unusual problems were encountered.

D. Sounding Equipment and Corrections to Echo Soundings

The following launch equipment was used to obtain soundings for the survey:

<u>Equipment</u>	<u>VESNO</u>	<u>Serial Number</u>
Model 200A Depth Recorder	2224	C537
Ross Model 4000 Transceiver		1050
Ross Model 6000 Digitizer		1039
Ross Model 5000 Fineline Depth Recorder	2225	1055
Ross Model 4000 Transceiver		1055
Ross Model 6000 Digitizer		1055
Raytheon Model ^{D DEPTH} 723 Del Recorder	2226	1278
Ross Model 4000 Transceiver		1100
Ross Model 6000 Digitizer		1045

All soundings were taken with the transducer mounted nearly on the centerline of the survey launch in use. All launch work was given an antenna distance of zero. The survey records were scanned and verified by trained members of the survey department and commissioned officers. The Sheet Manager (author of this report) reviewed the information and all records. Significant peaks and deeps between soundings were inserted. Errors to digitized data were corrected on the electronic corrector tape.

Phase calibration checks were made throughout the day while running hydrography. Adjustments were made and noted on the printout, in the sounding volumes and noted on the fathogram. Deviations of the trace from the calibration were corrected in the scanning of data.

Velocity correctors were obtained from Nansen casts on the following dates, at the following locations:

<u>Cast Number</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Date</u>
#3	37-46.1 N	74-58.6 W	25 August 1982
#4	37-44.9 N	74-59.2 W	21 September 1982
#5	37-37.8 N	75-02.7 W	30 October 1982

Corrections from Cast Number 3 were applied to all hydrography from JD224 to JD246. Cast #4 was used to correct hydrography from JD263 to JD287. Corrections for JD302 to JD312 were obtained from cast #5.

Bar checks were taken by the survey launches at the beginning of each day and at the end of the day whenever possible. However, there were days on which no bar checks could be obtained due to conditions of weather and sea. Comparisons were made between the bar checks and the Nansen cast data. The data compared favorably. Differences are noted on the abstract of sounding correctors as instrument error. Nansen cast data were used for velocity correctors where bar checks were not taken to the full depth of the survey. A draft of 1.6 feet were applied to all launch soundings during off-line processing. Settlement and squat correctors for the launches were determined on July 23, 1982 and July 26, 1982 at Little Creek Naval Amphibious Base, Little Creek, Virginia. Information concerning Nansen cast and bar check comparisons, as well as settlement and squat at various speeds is included in a separate part of the survey records. The settlement and squat correctors are to be applied during the final processing of the survey data at OA/CAM3, Processing Division, in the form of the TC/TI

tape. Predicted tides based on Hampton Roads (Sewell Point), Virginia from the 1982 Tide Tables were used. Predicted tide correctors were made with program AM 500. A single zone was used to simplify processing. The zoning specified in the Project Instructions for OPR-DI03-MI-82 show two tide zones. Tide correctors were generally applied during on-line operations; when necessary, predicted tides were applied during off-line plotting.

Smooth tides were requested from the Chief, Tides and Water Levels Branch (OA/C23) in a letter dated November 24, 1982, for the period of hydrography. A copy of the letter is included with this report.

E. Hydrographic Sheets

The survey was plotted on four mylar sheets prepared by the MT MITCHELL hydroplot system using program RK20I.

<u>Sheet Number</u>	<u>Type</u>	<u>Skew</u>	
1	Main Scheme, Shorelines	0,21,54	Bottom Samples, Detached Positions
2	Crosslines, BS,DP	0,21,54	
3	Main Scheme	90,21,36	
4	Crosslines, Shorelines, Bottom Samples, Detached Positions	90,21,36	

The area included on sheets 3 and 4 which is outside of the survey limit at Latitude 37-56-30 N could also have been plotted as an inset within the limits of the sheet. It is included in its current position to give the sheet more completeness and prevent a holiday between the survey and prior survey H-9796.

Soundings on field sheets are corrected for draft, predicted tides, digitizing errors and sound velocity. Sheets are not corrected for smooth tides, settlement and squat or instrument error; these correctors will be applied on the final smooth plot prepared by the Processing Division, Atlantic Marine Center (OA/CAM3) Norfolk, Virginia.

All field records and the following tapes have been forwarded by the Atlantic Marine Center Processing Division for verification and smooth plottings:

- Hyperbolic Master Tapes
- Range-Range Master Tapes
- Electronic Corrector Tapes
- Velocity Corrector Tapes
- Parameter Tapes
- Signal Tape
- TC/TI Tapes

The sheets for the south area (1 and 2) have considerable overlap with those for the east area (3 and 4). This was done to facilitate field operations.

F. Control Stations

Hydrotrac equipment occupied the following control station:

<u>Station No.</u>	<u>Station Name</u>	<u>Latitude North</u>	<u>Latitude West</u>
100	GRAVITY 1965 (1980)	36-40-31.454	75-54-56.471

200	BIRD 1909 RM 5, 1982	37-44-17.414	75-35-11.904
300	JONES 1980 ¹	37-53-16.699	75-20-31.186

Del Norte Equipment occupied the following stations:

<u>Station No.</u>	<u>Station Name</u>	<u>Latitude North</u>	<u>Latitude West</u>
280	EASY WALLOPS BEACH ^{COAST GUARD} CG LOT #3	37-52-34.534	75-26-38.652
291	ASSATEAGUE BEACH CG LOT ECC 1982	37-51-48.913	75-22-06.592
321	STEEL 1962 RM 1, 1982	37-55-10.324	75-19-22.052
327	H 6 VA, 1978	37-56-40.422	75-18-33.276
340	H 4 VA, 1978	37-58-20.864	75-17-15.574

The following stations were also used for calibrations:

<u>Station No.</u>	<u>Station Name</u>	<u>Latitude North</u>	<u>Latitude West</u>
270	WALLOPS ISLAND ^{NASA NEW TANK, 1975} (New NASA MAST)	37-50-32.204	75-28-48.887
273	WALLOPS ISLAND NASA METMAST W 80, 1980	37-51-08.099	75-28-16.909
290	ASSATEAGUE BEACH CG LOOKOUT TOWER No 150, 1959	37-51-48.970	75-22-06.649
299	ASSATEAGUE NPS DOME 1982	37-53-15.578	75-20-31.626
310	ASSATEAGUE LIGHTHOUSE (1909)	37-54-39.797	75-21-22.991

All stations were established using Third Order, Class I survey methods, based on the North American Datum 1927. A complete list of stations and the geographic positions of each is included as Appendix F of this report.

G. Hydrographic Position Control

Position control for the survey was obtained using Hydrotrac, manufactured by ODOM Offshore Surveys Inc., used in the hyperbolic mode, and Del Norte, manufactured by Del Norte Industries, used in the range-range mode.

The following Hydrotrac equipment, operating at a frequency of 1718.59 KHz, was used in conducting the survey:

<u>Master</u>	<u>Master Drive Unit</u>	<u>121</u>
(Station 200)	Linear Power Amplifier	540
	Coupler	131
	Power Supply	102
Slave I (Station 100)	Receiver/Shore Drive Unit	226
	Linear Power Amplifier	536
	Coupler	130
	Power Supply	754
Slave II (Station 300)	Receiver/Shore Drive Unit	215
	Linear Power Amplifier	539
	Coupler 7/14/82(195)	
	11/02/82 (307)	133
	Coupler 11/03/82(307)	
	11/10/82(314)	214
	Power Supply	752

VESNO: 2224	Hydrotrac Receiver Sawtooth Recorder	320 A-175
VESNO: 2225	Hydrotrac Receiver Sawtooth Recorder	328 1914
VESNO: 2226	Hydrotrac Receiver Sawtooth Recorder	320 A-175

The following Del Norte equipment was used:

Note: Del Norte equipment was moved after an area was completed to provide optimum coverage. This accounts for the same equipment being at different stations on the same day.

VESNO: 2224	DMU/Master	230/159
VESNO: 2225	DMU/Master	432/1070

	<u>Remote Units</u>	
<u>JD</u>	<u>76 Unit (#1062)</u>	<u>72 Unit (#1137)</u>
268	291	321
272	291	321
280	291	321
280	327	321
281	327	321
281	327	340
282	327	340

<u>JD</u>	<u>74 Unit (189)</u>	<u>78 Unit (253)</u>
278	280	291

Position control for the area generally north of Latitude $37^{\circ}52' N$ was obtained using the Del Norte equipment. Del Norte equipment was used to meet the position accuracy requirements set out in the Hydrographic Manual, which were not attainable with the Hydrotrac in that area. The Hydrotrac work appears on the "south" sheet and the Del Norte work appears on the "east" sheet.

It should be noted that some inshore areas had intersection angles of less than 30° . The areas where this was the case were generally less than 200 meters inside the 30° intersection curve. The areas account for a small percentage of hydrography and it would have been costly to run such small areas using range-azimuth control.

Lane counts and partial correctors for the launches were determined twice daily, by three point sextant calibration using RK 561. The range and angle method calibration was also used during the survey. The range and angle method is described on page 4-27 of the Hydrographic Manual as follows:

"Using the range and angle method, the vessel steers along a sensitive range at slow speed until a predetermined sextant angle to the right or left of the range is closed. Electronic position data are observed at that instant and compared with values that have been computed in advance."

For both the Hydrotrac and Del Norte equipment, range and angle method calibration was used running a range created by stations 299 and 310. The left angle was observed between station 290 and the range of stations 299 and 310. Correctors from both range and angle method and three point sextant fix were determined by averaging 5 values obtained. Calibration was performed at the beginning and end of each day of hydrography. On those days on which a second (end of day) calibration could not be obtained, a whole lane count for Hydrotrac was made with the ship to assure no change had occurred. The whole lane counts for Hydrotrac were possible because the ship monitored the Hydrotrac throughout the field season, including periods at anchor.

While running hydrography with Hydrotrac control, the whole lanes of the Hydrotrac unit were constantly monitored on the sawtooth, annotated and compared with the digital readout of lanes on the Hydrotrac receiver.

The names and locations of the stations used for calibration are given in Appendix F, List of Stations. The Del Norte equipment was calibrated along fixed baselines on 01/04 October 1982 and 18 October 1982. Records of Del Norte calibration are included with the support data for this survey. While running hydrography with Hydrotrac control, the whole lanes of the Hydrotrac unit were constantly monitored on the sawtooth, annotated and compared with the digital readout of lanes on the Hydrotrac receiver. *See SECTION 2.5. of the Data Management Report.*

H. Shoreline

Sounding lines were run parallel to the shoreline at the inshore limit of safe navigation. A second line was then run at 50 meters offshore to allow safe turning room for the launches. Shoreline details were transferred in black to the field sheets from digitized shoreline supplied by the Atlantic Marine Center. The digitized shoreline was used because it was more recent than the TP00901 shoreline map. Shoreline details were transferred in black in accordance with the project instructions. Groins which exist on Wallops Island and appear in the digitized data were checked and verified as to location during the survey. The number and position were checked by running a launch approximately 30 meters off the ends of the groins and taking detached positions at every fifth or sixth groin.

A discrepancy observed during the hydrography occurs along the unnamed island west of the Chincoteague Entrance Channel from Latitude 37-52-20 N, Longitude 75-25-18 W to Latitude 37-52-46 N, Longitude 75-25-12 W. The correction is drawn as a red broken line. The new shoreline was drawn from launch observations made at the location. The shoreline movement study of the area has shown the island to be growing. This is also evident while comparing prior surveys with this survey. The shoreline shown on the field sheet should be charted until a better, i.e., photogrammetric, shoreline can be obtained. Elsewhere the agreement between the digital data and the survey is acceptable. *SEE SECTION 2.6. OF THE EVALUATION REPORT*

I. Crosslines *SEE SECTION 3.2. OF THE EVALUATION REPORT*

Crosslines were run at an angle of 45° or more to the mainscheme lines.

The 49.6 miles of crosslines run amount to 18.4% of the mainscheme hydrography when comparing mainscheme and crosslines. Ninety-five percent of the crossline soundings ^{is}~~are~~_{OK} in agreement to two feet; 70% of the crossline soundings ^{is}~~are~~_{OK} in agreement to one foot.

The single area of the survey where crosslines differed with mainscheme values by more than two feet was in the vicinity of Latitude 37-55.0 N, Longitude 75-17.1 W. In this area disagreement was between three and six feet. The discrepancy is most likely due to abnormally high tides. The area should be reviewed again after smooth tides are added.

It should be noted that crosslines in the vicinity of Wallops Island were run with VESNO 2226, while the mainscheme was obtained by VENSO 2224.

J. Junction Surveys *SEE SECTION 5 OF THE EVALUATION REPORT*

The survey ~~was~~ junctions with the following surveys:

<u>Survey</u>	<u>Scale</u>	<u>Year</u>	<u>Area of Junction</u>
H-9796	1:20,000	1978	Northeastern section
H-10044	1:20,000	1982	Southeastern section
H-10045	1:20,000	1982	Southern section

In comparing survey H-9796, with this survey, 60% of the soundings agree within one foot or better. One hundred percent of all compared valued agree within two feet. The present survey (H-10046) tends to have the deeper values.

Survey H-10044 compares well with this survey. All soundings agree within two feet. The soundings on this survey (H-10046) tend to be the deeper of the two values when a lack of total agreement occurs.

Survey H-10045 shows excellent agreement with this survey. All soundings agree to within one foot; neither survey tends to be deeper or shallower. An excellent agreement of contours was also obtained from the comparison.

K. Comparison to the Prior Survey *SEE ALSO SECTION 6. OF THE EVALUATION REPORT.*

The survey was compared with the following prior surveys:

<u>Registry No.</u>	<u>Scale</u>	<u>Year</u>
H-8764	1:20,000	1962
H-5711	1:20,000	193 ⁴ 2
<i>H-5702</i>	<i>1:40,000</i>	<i>1934</i>
<i>H-5703</i>	<i>1:20,000</i>	<i>1934</i>

The comparison between the current survey and survey H-8764 shows the following agreement:

35%	within	± 1 foot
50%	within	± 2 feet
60%	within	± 3 feet
75%	within	± 5 feet
25%	more than	^{to 26} 5 feet difference

This agreement was true generally throughout the area covered by survey H-8764. The area of best agreement was between Wallops Island and the tip of Assateague Island.

Shoreline is building along the northwestern tip of Wallops Island and along the southern and western end of Assateague Island. The island to the west of Chincoteague Inlet, shown on the current survey existed only as a single 0 foot sounding in 1962.

While there is evidence of shoal migration on the current survey, the more prominent features such as Turner Lump, Chincoteague Shoal and Blackfish Bank are evident. The greatest disagreement between the two surveys is in the area immediately south of the Chincoteague Inlet Entrance Channel. The reason for disagreements of ^{up to 26}~~10~~ or more feet is most likely due to the dredging of the channel after survey H-8764 was performed. Entrance Channel dredging was being accomplished during July 1982.

The comparison with survey H-5714 showed the following agreement:

10%	within	± 1 foot
25%	within	± 2 feet
55%	within	± 3 feet
90%	within	± 5 feet
10% more than 5 feet difference		

*SEE SECTION 6. OF THE
EVALUATION REPORT.*

Along Assateague Island south of Latitude 37-55-30 N, the shoreline has eroded as much as 200 meters by sea action. North of this latitude the shore appears to have moved out and there is a buildup of the shore to seaward not evident on survey H-5714. There is evidence of shoal migration from survey H-5714 to H-10046. However, the major bottom features are evident and present on both surveys.

*SEE SECTION 6. OF THE
EVALUATION REPORT.*

The following PSR items were listed in the survey area: *SEE SECTION 4.K. OF THE
EVALUATION REPORT.*

PSR Item #35 *SEE 7. a. 1) OF THE EVALUATION REPORT.*

Description: Boiler baring 4 feet at MLW Source: H-5714 (1934)

GP: L 37-53-57.9 N 75-19-45.0 W

The boiler was not visible at any condition of the tide. The boiler, if it exists, is most likely in water deeper than it was in the 1934 survey. No search

was possible because of adverse surf conditions at the time the hydrography was performed. The symbol on the chart should be changed to reflect the fact that no part of the boiler bares at MLW. *SEE SECTION 7.2.1) OF THE EVALUATION REPORT.*

PSR Item #36

Description: Wreck Covered 11 ft. Source: H-5702 (1934)

^{LATITUDE}
GP: ~~X~~ 37-51-02.8 N ^{LONGITUDE} 75-15-58.5 W

The search for PSR Item #36 was conducted at 100 meter spacing over an area approximately ½ mile square. The wreck, assuming it exists, appears to be on a bank. The area in which the PSR item is described is ^{IN THE VICINITY OF} a fish haven. The evidence of the wreck's existence may be obliterated by the image cast by groups of fish on the fathogram. A depth of ²14 feet appear at Latitude 37-^{50-58.47}51.0 N, Longitude 75-16.1 W. This is the shallowest depth appearing in the area of the PSR Items described position. The item should be shown as a wreck as PA (Position Approximate). *DO NOT CONCUR. SEE SECTION 7.2. OF EVALUATION REPORT.*

A spike on the fathogram was observed in the vicinity of Latitude 37-54-40 N, Longitude 75-19-20 W. A search was conducted in the area at 50 meter spacing ✓ to determine if a wreck was present. This search covered an area approximately ¼ mile by 600 meters. It was determine^d the spike was part of a natural bottom feature. *DO NOT CONCUR. 21 SUBM OBSTR SHOWN ON PRESENT SURVEY.*

L. Chart Comparison *See section 7.2. of the Evaluation Report.*

The survey was compared with the following charts:

<u>Chart</u>	<u>Edition</u>	<u>Date</u>	<u>Scale</u>
12210	26	31 October 1981	1:80,000
12200	34	16 January 1982	1:416,944
<i>12211</i>	<i>28</i>	<i>22 Aug 257 1981</i>	<i>1:80,000</i>

The area having the best agreement was from Wallops Island east to the southern tip of Assateague Island. The comparison in this area is good, with 70% of the compared sounding showing agreement to within two feet. The remaining soundings in the area show a disagreement of more than two feet which at the depths in the area are outside the tolerances set out in the Hydrographic Manual.

The following agreements were determined from compared soundings throughout the survey area:

45%	within	± 2 feet
75%	within	± 5 feet
25% disagreed by more than 5 feet		

Shoal migration is apparent, but many small shoals shown on the current chart were not found on the current survey. The shapes and sizes, as well as positions of the shoals reflect the present survey soundings. The major underwater charted

features such as Blackfish Bank and Turners Lump were found. The size and shape of the major features apparently has changed and again should reflect the information obtained from this survey. *Concur*

All charted landmarks and fixed aids were verified by sextant fixes.

The following soundings were found to be shallower on the current survey than on the current chart: *(CHART THE PRESENT SURVEY DEPTHS AS SHOWN ON THE SMOOTH SHEET)*

<u>Charted Depth</u>	<u>Survey Depth</u>	<u>Latitude (North)</u>	<u>Longitude (West)</u>
17	14	37-51.0	75-16.1
27	18	37-50.1	75-17.7
9	6	37-51.8	75-23.2
7	3	37-52.1	75-23.8

Generally throughout the survey, current survey work is deeper than information on the current chart.

→ A wreck, the mast of which is visible at all stages of the tide (approximately 1³/₄ feet at MLLW) was found to the north of the Chincoteague Inlet Entrance Channel at Latitude 37-51-54.3 N, Longitude 75-24-06.2 W. The wreck should be plotted as a ^{DANGEROUS SUNKEN}wreck with mast visible at all stages of the tide, at the above location.

A piling, charted at Latitude 37-51.⁶/₅ N, Longitude 75-23.9 W was searched for but not found. A full circle dive sweep search, with a radius of 100 feet, was made of the area. No piling or other obstruction was found. The piling's existence should be considered disproven and it should be removed from the chart. -DO NOT CONCUR
SEE SECTION 7.2.6. OF THE
EVALUATION REPORT.

Other items shown on the current chart include a wreck west of the Chincoteague Inlet Entrance Channel shown as PA (Position Approximate). No evidence of its existence was seen, however a search was not made for this wreck because of adverse surf action. A wreck shown at Latitude $37^{\circ}52'00''$ N, Longitude $75^{\circ}23'42''$ W as MASTS, is concluded to be the wreck not charted but found at Latitude $37^{\circ}51'54.3''$ N, Longitude $75^{\circ}24'06.2''$ W. A wreck shown at Latitude $37^{\circ}54'00''$ N, Longitude $75^{\circ}19'45''$ W is the boiler listed as PSR Item 35. The wreck at Latitude $37^{\circ}57'42''$ N, Longitude $75^{\circ}17'36''$ W was not found. However, a full search was not made for it, again due to adverse surf action.

SEE SECTION 7.2.3 OF THE EVALUATION REPORT.

SEE SECTION 7.2.4 OF THE EVALUATION REPORT.

SEE SECTION 7.2.5 OF THE EVALUATION REPORT.

An addition of the word BREAKERS should appear at Latitude $37^{\circ}51'50''$ N, Longitude $75^{\circ}25'10''$ W. Waves were seen breaking in all sea conditions at this location. ✓

M. Adequacy of the Survey *SEE EVALUATION REPORT.*

The survey is considered complete and adequate to supersede prior surveys for charting.

N. Aids to Navigation

Eight floating aids to navigation exist within the limits of the survey. The floating aids and position of each is given here:

<u>Name</u>	<u>Characteristics</u>	<u>Position No.</u>	<u>Latitude (N)</u>	<u>Longitude (W)</u>
BLACKFISH BANK <i>BELL</i> BUOY 8A	Red, unlit, bell buoy	6421	37-50-23.3	75-15-56.6
SHIP SHOAL BUOY	Black and White horizontal stripes, nun, unlighted	6455	37-50-56.3	75-19-52.8
CHINCOTEAGUE INLET LIGHTED BUOY 2	Red 2.5 Flash	4052	37-51-20.3	75-24-51.7
CHINCOTEAGUE INLET LIGHTED BUOY 3	Black, unlighted, can	4056	37-51-20.2	75-24-53.6
CHINCOTEAGUE INLET LIGHTED BUOY 4	Red 2.5 Flash	4053	37-51-35.6	75-24-50.1
CHINCOTEAGUE INLET BUOY 5	Black, unlit, can	4055	37-51-35.6	75-24-52.0
CHINCOTEAGUE INLET LIGHTED BUOY 6	Red, temporary 4 sec Fl replacement type	4054	37-52-09.1	75-25-51.1

The buoys listed as Chincoteague Inlet buoys are set up to delineate the channel leading into Chincoteague Inlet. The positions of the buoys adequately marked the channel's location.

O. Statistics

The following statistics were compiled during this survey:

Linear Miles of Mainscheme Hydrography	268.9
Linear Miles of Crosslines	49.6
Linear Miles of Development	150.7
Total Linear Miles of Hydrography	469.2
Total Square Miles of Hydrography	29.5
Total Miscellaneous Miles	376.4
Total Miles Run	845.6
Total Number of Positions	2231
Nansen Casts	3
Tide Station Occupied	1
Bottom Samples	23

P. Miscellaneous

The Chincoteague Entrance Channel was resurveyed on JD309 to determine the condition of the channel after a severe storm. The soundings (Position Numbers 4072 obtained to 4088) on JD309 were generally two feet deeper than previous soundings. The tides appeared to be higher than normal because of several days of steady winds from the south. The apparent discrepancy will probably resolve itself after smooth tides are applied to the survey data.

Q. Recommendations *SEE SECTIONS 6 AND 7 OF THE EVALUATION REPORT.*

It is recommended that this survey supersede all prior surveys for charting.

Recommendations for the Presurvey Review Items are contained in the report.

R. Automated Data Processing

	<u>Program Name</u>	<u>Version</u>
RK112	Range-Range and Hyperbolic Real Time Plot	08-04-81
RK201	Grid, Signals and Lattice	04-18-75
RK210	Hyperbolic Non-Real Time Plot	02-02-81
RK211	Range-Range Non Real Time Plot	02-02-81
RK300	Utility Computations	10-21-80
RK330	Data Reformat and Check	05-04-75
RK360	Electronic Corrector Tape Abstract	02-02-76
RK409	Geodetic Utility Package	09-20-78
AM500	Predicted Tide Generator	11-10-72
RK530	Velocity Corrections Computations	05-10-76
RK561	Geodetic Calibration	02-19-76
AM602	Extended Line Oriented Editor	05-20-75

S. Reference to Reports

Coast Pilot Report NOAA Ship MT MITCHELL, Eastern Shore, Virginia,
OPR-DI03-MI82; Horizontal Control Report for OPR-DI03-MI-82.

Respectfully submitted,

Donald I. Crews

DONALD I. CREWS
ENSIGN, NOAA

APPENDIX F
LIST OF STATIONS

MASTER SIGNAL NAME LIST

001 100= GRAVITY
 002 110= CHESAPEAKE LIGHT TOWER
 003 120= HOG ISLAND COAST GUARD LOOKOUT TOWER
 004 125= HOWARD (MARK IS ON 73 FT. CATWALK AROUND TOWER) (1962)
 005 130= LITTLE (1959)
 006 131= LITTLE MACHIPONGO INLET COAST GUARD LOT
 007 132= LITTLE ECC. (1932)
 008 135= HOG (1933)
 009 140= REVEL (1959)
 010 142= TARR (1962)
 011 145= TULL (1962)
 012 146= PARRAMORE BEACH COAST GUARD TOWER
 013 150= BRAD (1962)
 014 155= HAMMOCK VFC (1933)
 015 160= BURTON VFC
 016 165= TOMPKINS (1962)
 017 167= METOMPKIN INLET COAST GUARD LOT # 152
 018 170= TERN (1962)
 019 175= JOYNES-2-(1934)
 020 130= BIRD (1909)
 021 200= BIRD (RM. 5)
 022 210= SUTTON. (1949)
 023 270= WALLOPS ISLAND (NEW NASA TANK)
 024 273= WALLOPS ISLAND NASA METMAST #30
 025 280= EASY WALLOPS BEACH COAST GUARD LOT # 3 (NEW TANK) TOWER
 026 283= H 3 VA 1973
 027 290= ASSATEAGUE BEACH COAST GUARD LOOKOUT TOWER # 150 (1959)
 028 291= ASSATEAGUE BEACH CG LOT ECC
 029 299= ASSATEAGUE NPS DONE
 030 300= JONES
 031 310= ASSATEAGUE LIGHTHOUSE (1909)
 032 319= STEEL RM2
 033 320= STEEL (1962)
 034 321= STEEL RM1
 035 324= H 7 VA 1973
 036 327= H 6 VA 1973
 037 330= H 5 VA 1973
 038 340= H 4 VA 1973
 039 350= H 3 VA 1973
 040 370= H 2 VA 1973

*

MASTER SIGNAL TAPE PRINTOUT

001	100	4	36	40	31454	075	54	56471	250	0000	171859
002	110	4	36	54	16158	075	42	47123	139	0000	000000
003	120	4	37	23	39409	075	42	31434	139	0000	000000
004	125	4	37	23	39453	075	42	31515	139	0000	000000
005	130	0	37	27	12013	075	40	30714	139	0013	000000
006	131	6	37	27	11947	075	40	30639	139	0015	000000
007	132	2	37	27	12019	075	40	30565	250	0013	000000
008	135	4	37	27	39565	075	40	15726	139	0000	000000
009	140	4	37	29	31700	075	39	48219	139	0000	000000
010	142	0	37	32	11100	075	37	24750	139	0000	000000
011	145	6	37	34	33483	075	36	01191	139	0000	000000
012	146	4	37	34	23559	075	37	03467	139	0000	000000
013	150	0	37	35	21197	075	36	57542	139	0000	000000
014	155	4	37	36	21103	075	38	45122	139	0000	000000
015	160	4	37	37	12105	075	38	52930	139	0000	000000
016	165	3	37	38	05988	075	35	53860	139	0000	000000
017	167	4	37	40	21070	075	35	40852	139	0000	000000
018	170	1	37	41	41887	075	35	11562	139	0000	000000
019	175	4	37	41	49767	075	36	50225	139	0000	000000
020	180	5	37	44	16918	075	35	09494	139	0000	000000
021	200	2	37	44	17414	075	35	11904	250	0000	171859
022	210	4	37	46	25644	075	33	44864	139	0000	000000
023	240	5	37	49	00905	075	30	11209	139	0000	000000
024	250	7	37	49	48629	075	31	22808	139	0000	000000
025	270	3	37	50	32204	075	28	48887	139	0000	000000
026	273	4	37	51	08099	075	28	16909	139	0000	000000
027	280	4	37	52	34534	075	26	38652	250	0000	000000
028	288	7	37	51	46270	075	22	03968	250	0004	000000
029	290	0	37	51	48970	075	22	06649	139	0000	000000
030	291	7	37	51	48913	075	22	06592	250	0006	000000
031	299	5	37	53	15578	075	20	31626	139	0007	000000
032	300	0	37	53	16699	075	20	31186	250	0000	171859
033	310	4	37	54	39797	075	21	22991	139	0000	000000
034	319	6	37	55	09071	075	19	21586	139	0000	000000
035	320	4	37	55	09696	075	19	22183	139	0000	000000
036	321	2	37	55	10324	075	19	22052	250	0006	000000
037	324	3	37	55	50303	075	18	57172	250	0000	000000
038	327	3	37	56	40422	075	18	33276	250	0000	000000
039	330	3	37	57	27186	075	17	56400	250	0000	000000
040	340	3	37	58	20864	075	17	15574	250	0000	000000
041	350	3	37	59	10652	075	16	35025	250	0000	000000
042	370	3	38	00	55525	075	15	17408	139	0000	000000

APPENDIX I

LANDMARKS FOR CHARTS

(There were no landmarks in this survey area)

RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	<div>ORIGINATOR</div> <input type="checkbox"/> PHOTO FIELD PARTY <input type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify)
POSITIONS DETERMINED AND/OR VERIFIED	FIELD ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	<div>OFFICE ACTIVITY REPRESENTATIVE</div> <input type="checkbox"/> REVIEWER <input type="checkbox"/> QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.)	
OFFICE I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	FIELD (Cont'd) B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982
FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection 5 - Field Identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75 *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis.. 8-12-75 **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

APPENDIX K
DIVE REPORT

DIVE REPORT

DIVE DATE: 5 November 1982

I. AREA OF INVESTIGATION

LOCATION- Atlantic Coast of Virginia, Approaches to Chincoteague Inlet

POSITION- Latitude: 37°51.7' N Longitude: 75°23.9' W

SURVEY SHEET- MI20-4-82 H10046 OPR-D103-MI-82

II. PURPOSE

Sweep for a charted piling.

III. SURVEY PROCEDURE

The launch's Hydrotrac system was calibrated and used for position determination. The position of the piling was scaled from Chart 12210, dated 31 October 1981.

Divers deployed a center buoy and an end buoy for a 100 ft. circle search.

IV. DIVE DATA

DIVERS- Rossmann, Collins, Jennings Surface Divemaster- DiMartino

TIME OF DIVE- 1900 GMT (Dive lasted 35 minutes)

DEPTH- 15 ft.

CURRENT- 1-2 knots, 090° T

VISIBILITY- 0 ft.

V. RESULTS

Nothing was snagged during the sweep.

IV. RECOMMENDATIONS

~~Charted piling be removed from chart.~~

DO NOT CONCUR. SEE SECTION 7.2.6 OF THE EVALUATION REPORT

APPENDIX K
APPROVAL SHEET


Approval Sheet

Date Jan 19 1983

Survey H-10046

Field No. MI-20-4-82

The field work for this survey was conducted under my daily review and supervision. I have reviewed this report with the final field sheet and approve them and the accompanying records. Together they represent a complete survey adequate to supercede all prior surveys for charting purposes, with exceptions noted in the body of this report.


Captain J. Austin Yeager, NOAA
Commanding,
NOAA SHIP MT MITCHEL

DATE: July 8, 1983

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): 863-0441 Wallops Island, VA

Period: August 30 - November 5, 1982

HYDROGRAPHIC SHEET: H-10046

OPR: D103

Locality: Offshore Wallops and Assaseague Island, Virginia

Plane of reference (mean lower low water): 3.01 ft.

Height of Mean High Water above Plane of Reference is 4.0 ft.

REMARKS: Recommended Zoning:

1. West of longitude $75^{\circ}20.0'$ zone direct.
2. East of $75^{\circ}20.0'$ apply $\times 0.94$ range ratio.

James C. Hubbard
Chief, Tidal Datums Section, Tides & Water
Levels Branch

GEOGRAPHIC NAMES

H-10046

Name on Survey	SOURCE OF INFORMATION										
	A 12200 12210 12211 CHART NO.	B ON PREVIOUS SURVEY	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND McNALLY ATLAS	H U.S. LIGHT LIST	K		
✓ Assateague Island	X										1
✓ Atlantic Ocean (title)	X										2
✓ Blackfish Bank	X										3
✓ Chincoteague Inlet	X										4
✓ Chincoteague Shoals	X										5
✓ Fishing Point	X										6
✓ Gunboat Point	X										7
✓ Toms Cove	X										8
✓ Turners Lump	X										9
✓ Virginia (title)	X										10
✓ Wallops Island	X										11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25

Approved:

Charles E. Hamilton
Geographer - 01/24/84

NOV 01 1984

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NO.: H-10046

Number of positions 2214

Number of soundings 12024

Number of control stations 13

	<u>TIME-HOURS</u>	<u>DATE COMPLETED</u>
Preprocessing Examination	<u>24</u>	<u>2/22/83</u>
Verification of Field Data	<u>493</u>	<u>9/28/84</u>
Quality Control Checks	<u>76</u>	
Evaluation and Analysis	<u>82</u>	<u>11/14/84</u>
Final Inspection	<u>12</u>	<u>11/17/84</u>
TOTAL TIME	<u>687</u>	
Marine Center Approval		<u>11/28/84</u>

Transmittal letter of survey and survey records will be included in the Descriptive Report to identify the records accompanying the survey.

ATLANTIC MARINE CENTER
EVALUATION REPORT

SURVEY NO.: H-10046

FIELD NO.: MI-20-4-82

Virginia, Atlantic Ocean, Chincoteague Shoals

SURVEYED: 30 August 1982 through 5 November 1982

SCALE: 1:20,000

PROJECT NO.: OPR-D103-MI-82

SOUNDINGS: Ross Digital Echo
Sounder, Raytheon
DE-732D Fathometer, Ross
Model 200A Depth Recorder

CONTROL: Odom Offshore Hydrotrac
(Hyperbolic), Del Norte
(Range/Range)

Chief of Party.....J. A. Yeager

Surveyed by.....L. A. Lapine
.....E. S. Varney
.....P. M. Thomas (B.R.N.)
.....G. R. Yates
.....K. P. Peters
.....F. W. Rossman
.....D. R. Henegar
.....C. N. McLean
.....D. I. Crews
.....J. A. Miller

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

1. INTRODUCTION

- a. No unusual problems were encountered during office processing.
- b. Notes in red were made in the Descriptive Report during office processing.

2. CONTROL AND SHORELINE

- a. Control is adequately discussed in sections F., G., and S. of the Descriptive Report.
- b. Shoreline is from digitized NOS-CERC Shoreline Movement Maps 219, 220 and 221.

In the vicinity of Latitude 37°52'55"N, Longitude 75°25'20"W, hydrography runs across the Shoreline Movement Map shoreline. Shoreline changes in this area were made in a dashed red line during office processing.

3. HYDROGRAPHY

a. Soundings at crossings agree within the criteria stated in sections 4.6.1 and 6.3.4.3 of the Hydrographic Manual and section 6.6 of the Project Instructions.

b. The standard depth curves could generally be drawn in their entirety. The supplemental twenty-four (24) and thirty-six (36) foot curves were drawn on the smooth sheet. Additional supplemental curves were drawn to better show the bottom relief. It is apparent that the mean low water line could not be delineated because of breakers and launch safety considerations.

c. Development of the bottom configuration and determination of least depths is considered adequate with the following exception:

Lines of hydrography run normal to the depth curves should have been extended closer to portions of the shore in order to provide a better delineation of the six (6) foot depth curve along the shore. The existing parallel lines of hydrography along the shore do not always provide sufficient data for the accurate delineation of depth curves.

4. CONDITIONS OF SURVEY

The smooth sheet and accompanying overlays, hydrographic records and reports are adequate and conform to the requirements of the Hydrographic Manual with the following exceptions:

a. The survey was not submitted to AMC in the prescribed time interval of six (6) weeks after termination of field operations required by section 6.13 of the Project Instructions. The survey was received five (5) weeks late.

b. No comparison was made with National Ocean Service Chart 12211 (28th ED, Aug 22/81).

c. It would have been desirable for bottom samples to be taken on shoal features as required by section 8.1 of the Project Instructions and section 4.5.9.2 of the Hydrographic Manual.

d. A negative report on dangers to navigation was not included in the Descriptive Report as required by section 6.12 of the Project Instructions.

e. Charted landmarks for charts within the project area were not investigated as required by section 4.5.13.1 of the Hydrographic Manual and section 4.2.2 of the Project Instructions.

f. The hydrographer submitted an incomplete NOAA Form 76-40, Nonfloating Aids or Landmarks for Charts, with the Descriptive Report. Appendix I states that there were no landmarks in the survey area. Some charted landmarks were common to control stations used by the hydrographer.

g. TC/TI correctors were submitted in error. This was corrected during office processing.

h. The hydrographer failed to make comparison with prior surveys H-5702 (1934) and H-5703 (1934).

i. The hydrographer failed to give position numbers for the spike found on the echogram mentioned on page seventeen (17) of the Descriptive Report.

5. JUNCTIONS

H-9796 (1978) to the northeast

H-10044 (1982) to the south

H-10045 (1982) to the south

The smooth sheet for survey H-9796 (1978) is archived at headquarters and a standard junction was not made. The comparison between a stable base copy of survey H-9796 (1978) shows excellent agreement between soundings in the junctional area. Except for a sixteen (16) foot sounding on the present survey in Latitude 37°57'54"N, Longitude 75°16'30"W which is located on the deep side of the eighteen (18) foot curve on H-9796 (1978), the standard junctional curves could be completed. This discrepancy may be attributed to some subsequent change of the bottom.

Excellent junctions were made between the present survey and surveys H-10044 (1982) and H-10045 (1982).

There were no contemporary junctional surveys to the east of the present survey. The charted depths and the present survey are in harmony to the east.

6. COMPARISON WITH PRIOR SURVEYS

- a. H-5702 (1934) 1:40,000
- H-5703 (1934) 1:20,000
- H-5714 (1934) 1:20,000

The above surveys taken together cover the entire present survey area.

H-5702 (1934) compares favorably with the present survey with soundings agreeing within plus or minus one (1) to five (5) feet with isolated differences up to nine (9) feet. The location of the deeps and highs are in general agreement with a slight migration to the southwest. The southern end of Blackfish Bank has eroded somewhat and consequently now has a least depth of fifteen (15) feet where previously it was eleven (11) feet. The sunken wreck with a least depth of eleven (11) feet in Blackfish Bank in Latitude 37°51'02.8", Longitude 75°15'58.5"

was brought forward to supplement the present survey (see also section 7.a.2 of this report).

The shoreline along the eastern shore of Assateague Island has accreted up to 200 meters in the northern half of the survey area and has receded up to 250 meters in the southern half of the survey area. Fishing Point, the southern end of Assateague Island, has shifted to the southwest approximately 400 to 1000 meters where prior survey depths of up to 17 feet previously existed. Numerous features alongshore out to approximately $1\frac{1}{2}$ nautical miles to the east of Assateague Island have eroded or shifted, generally to the southwest. Changes up to 15 feet in 30-foot depths have occurred. The crescent shaped shoal off Fishing Point in the vicinity of Latitude $37^{\circ}51'$, Longitude $75^{\circ}21'$ with prior survey depths to five (5) feet has shifted approximately 600 meters to the southwest where prior survey depths were 25 to 27 feet. However, Chincoteague Shoals in the survey area has remained relatively stable in its location. Dramatic bottom change has occurred in the vicinity of Chincoteague Inlet.

The wreck (boiler, bares 4 feet at MLW) from survey H-5714 in Latitude $37^{\circ}53'57.9''$, Longitude $75^{\circ}19'45.0''$ was brought forward to the present survey as a sunken wreck in present survey depths of 11 to 14 feet. See also section 7.a.1) of this report.

Except as noted above, the present survey is considered adequate to supersede the above prior surveys in the common area.

b. H-8764 (1962) 1:20,000 (Unverified Survey)

There was no evidence found by the prior survey (H-8764) of the sunken wreck covered by eleven (11) feet on Blackfish Bank. Blackfish Bank has migrated 200-300 meters to the southwest since the 1962 survey.

There is some shoreline recession along the eastern coast of Assateague Island at approximately 50 meters since the 1962 survey. Fishing Point, the southwestern end of Assateague Island has migrated seaward to the southwest approximately 400 meters since the 1962 survey.

There has been a considerable shifting, building-up, and erosion of shoal features east and south off Assateague Island. Changes from 10 to 15 feet in depths landward of the 36-foot curve are not uncommon. The area in the vicinity of Chincoteague inlet has undergone considerable bottom change. These changes in the common survey area with the present survey can be attributable to natural processes.

The present survey is considered adequate to supersede survey H-8764 (1962) in the common area.

7. COMPARISON WITH CHARTS

- No. 12200 (34th Edition, January 16, 1982)
- × No. 12210 (26th Edition, October 31, 1981)
- ✓ No. 12211 (28th Edition, August 22, 1981)

a. Hydrography

The charted hydrography originates with previously discussed prior surveys and miscellaneous sources.

Two (2) Presurvey Review Items and four (4) charted features were investigated or discussed by the hydrographer in sections K and L of the Descriptive Report. Further attention is directed to the following:

1) Presurvey Review Item #35 (AWOIS 2434), charted in Latitude 37°53'57.9"N, Longitude 75°19'45"W, is a boiler baring 4 feet at MLLW and originates with prior survey H-5714 (1934). The item was not searched for; however, it was noted that it is no longer visible at any time. It is recommended that the item remain as charted and additional work be done to verify or disprove the items existence.

2) Presurvey Review Item #36 (AWOIS 997) charted in Latitude 37°51'02"N, Longitude 75°15'57"W, is a sunken wreck covered 11 feet and originates with prior survey H-5702 (1934). The item was searched for by the hydrographer with negative results. It is recommended that this item be retained as charted and additional wire drag/side scan sonar work be done to verify or disprove the wreck's existence.

3) A dangerous wreck, PA, charted in Latitude 37°52'00"N, Longitude 75°25'00"W, was not searched for. It is recommended that the wreck remain as charted.

4) An uncharted dangerous sunken wreck, MASTS was located on year day 309 in Latitude 37°51'52.3"N, Longitude 75°24'03.2"W. This wreck is concluded to be the charted dangerous sunken wreck, MASTS IN Latitude 37°52'00"N, Longitude 75°23'42"W. It is recommended that the charted wreck be removed and charted in the position provided by the hydrographer from the present survey.

5) A dangerous sunken wreck charted in Latitude 37°57'42"N, Longitude 75°17'36"W, was not found. Since a full search was not made for the wreck, it is recommended that this item be retained as charted and that additional work be done to verify or disprove the wreck's existence.

6) The piling (bare at MHW) charted in Latitude 37°51.6'N, Longitude 75°23.9'W was searched for with negative results; however, the dive report states that visibility in the area was zero (0). It is recommended that the piling be revised to a submerged piling in the charted location.

7) The Subm pipe, PA charted in Latitude 37°55'54", Longitude 75°18'43" has not been verified nor disproved by the present survey. It should be retained as charted.

8) The Obstr, Fish Haven (auth min 17 ft) charted in the vicinity of Latitude 37°51'06", Longitude 75°16'00" has not been

CL 1411/78
Aussis
mstm 11/17/86

Aussis
mstm 11/17/86

Aussis mstm 11/18/86

LMM / 86
Aussis mstm 11/18/86

Aussis mstm 11/18/86

verified nor disproved by the present survey. It should be retained as charted.

9) The ruins charted in the vicinity of Latitude 37°51'18", Longitude 75°28'00" have not been verified nor disproved by the present survey. However, shoreline change and the presence of groins in the area indicate that they may no longer be extant. The ruins appear to originate with shoreline map TP-00901. The chart compiler should review this source and latest shoreline data for retention or deletion.

Except as noted above, the present survey is adequate to supersede the charted hydrography within the common area.

b. Aids to Navigation


There is one (1) fixed and seven (7) floating aids to navigation on the survey smooth sheet. These aids appear adequate to serve their intended purpose.


8. COMPLIANCE WITH PROJECT INSTRUCTIONS

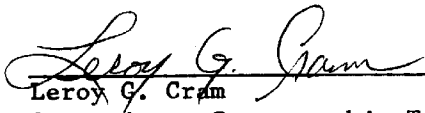
This survey adequately complies with the Project Instructions except as noted in sections 4 and 7 of this report.

9. ADDITIONAL FIELD WORK

This is an adequate basic survey. Recommendations for additional field work on Presurvey Review Items are found in section K and Q of the Descriptive Report and section 7.a. of this report.


Reginald L. Keene
Cartographic Technician
Verification of Field Data



Richard H. Whitfield
Cartographic Technician
Evaluation and Analysis

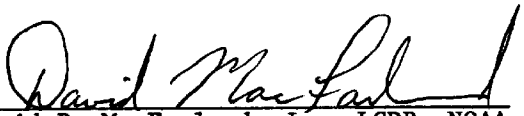

Leroy G. Cram
Supervisory Cartographic Technician
Verification Check

Inspection Report
H-10046

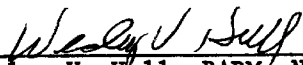
The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet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

Inspected


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


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

Approved November 28, 1984


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



MOA23-05-85

LETTER TRANSMITTING DATA

TO:

CHIEF, DATA CONTROL SECTION
HYDROGRAPHIC SURVEYS BRANCH, N/CG243
NATIONAL OCEAN SERVICE, NOAA
ROCKVILLE, MD 20852

DATA AS LISTED BELOW WERE FORWARDED TO YOU
BY (Check):☐ ORDINARY MAIL☐ AIR MAIL☒ REGISTERED MAIL☐ EXPRESS☐ SBL (Give number) _____

DATE FORWARDED

February 2, 1985

NUMBER OF PACKAGES

one tube; one box

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

H-10046, OPR-D103-MI-82, Field No. MI-20-4-82
Virginia, Atlantic Ocean, Chincoteague Shoals

Tube: ☒ One smooth sheet
☒ One smooth position overlay
☒ Two smooth excess overlays
☒ One Original Descriptive Report

Box: ☒ Five final field sheets
☒ Two preliminary field sheets
☒ One cahier containing: Echograms and field data printouts for:
VESNO 2224: JD:266, 267, 268, 272, 279, 280, 281 & 282
VESNO 2225: JD:242, 243, 264, 265, 266, 267, 268, 269
271, 272, 278, 302, 305 and 309
VESNO 2226: JD:243
☒ Three sounding volumes
☒ Bundle sawtooth position chart(s)
☒ One accordian file with position calibration records
☒ One accordian file with velocity correction records
☒ One accordian file with data removed from Descriptive Report
☒ One envelope with miscellaneous data
☒ One cahier containing: final control printout; final sounding printout
final position printout; L-File (Z-Record) printout

FROM: (Signature)

D. B. MACFARLAND, JR., LCDR, CHIEF, HYDRO SURVEYS BR

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

ATLANTIC MARINE CENTER
HYDROGRAPHIC SURVEYS BRANCH (N/MOA23)
439 W. YORK STREET
NORFOLK, VIRGINIA 23510

ATTN: THERESA HIGH

Dwayne S. Clark
February 7, 1985
N/CG243

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10046

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.

[illegible]