

10066

Diagram No. 1221-2

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-20-5-82 ..
Office No..... H-10066 ..

LOCALITY

State Virginia ..
General Locality .. Atlantic Ocean ..
Locality East of Parramore Banks ..

1982

CHIEF OF PARTY
CAPT J.A. Yeager

LIBRARY & ARCHIVES

DATE September 28, 1984 ..

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

10066

Area 2

CHTS

112210

112200

130033

*to sign off see
Record of Application*

NOAA FORM 77-28
(11-72)

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

REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H-10066

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.

MI-20-5-82

State Virginia

General locality Atlantic Ocean

Locality East of Parramore Banks

Scale 1/20,000

Date of survey 06-09 November 1982

Instructions dated 05 May 1982

Project No. OPR-D103-MI-82

Vessel NOAA Ship Mt. Mitchell S-222

VESNO 2220

Chief of party Captain J. Austin Yeager

Surveyed by See remarks

Soundings taken by echo sounder, ~~XXX XXX~~ Ross Model 5000 echo sounder

Graphic record scaled by MS, BEM, BC, VLG, EM, RW

Graphic record checked by MS, ^BKEM, BC, VLG, EM, RW

Protracted by N/A

Automated plot by SYNETICS 1201 PLOTTER
A (BMC)

Verification by F.L. SAUNDERS

Soundings in ~~XXXXXX~~ feet at MLLW

REMARKS: LT E.S. Varney, LT P.M. Thomas (BRN), LTJG G.R. Yates Jr.,

LTJG F. ^{W.}Rossmann, LTJG K. ^{P.}Peters, ENS. R.D. Henegar, ENS. B.

Coakley, ENS. D. ^{I.}Crews

NOTES IN RED WERE MADE DURING VERIFICATION

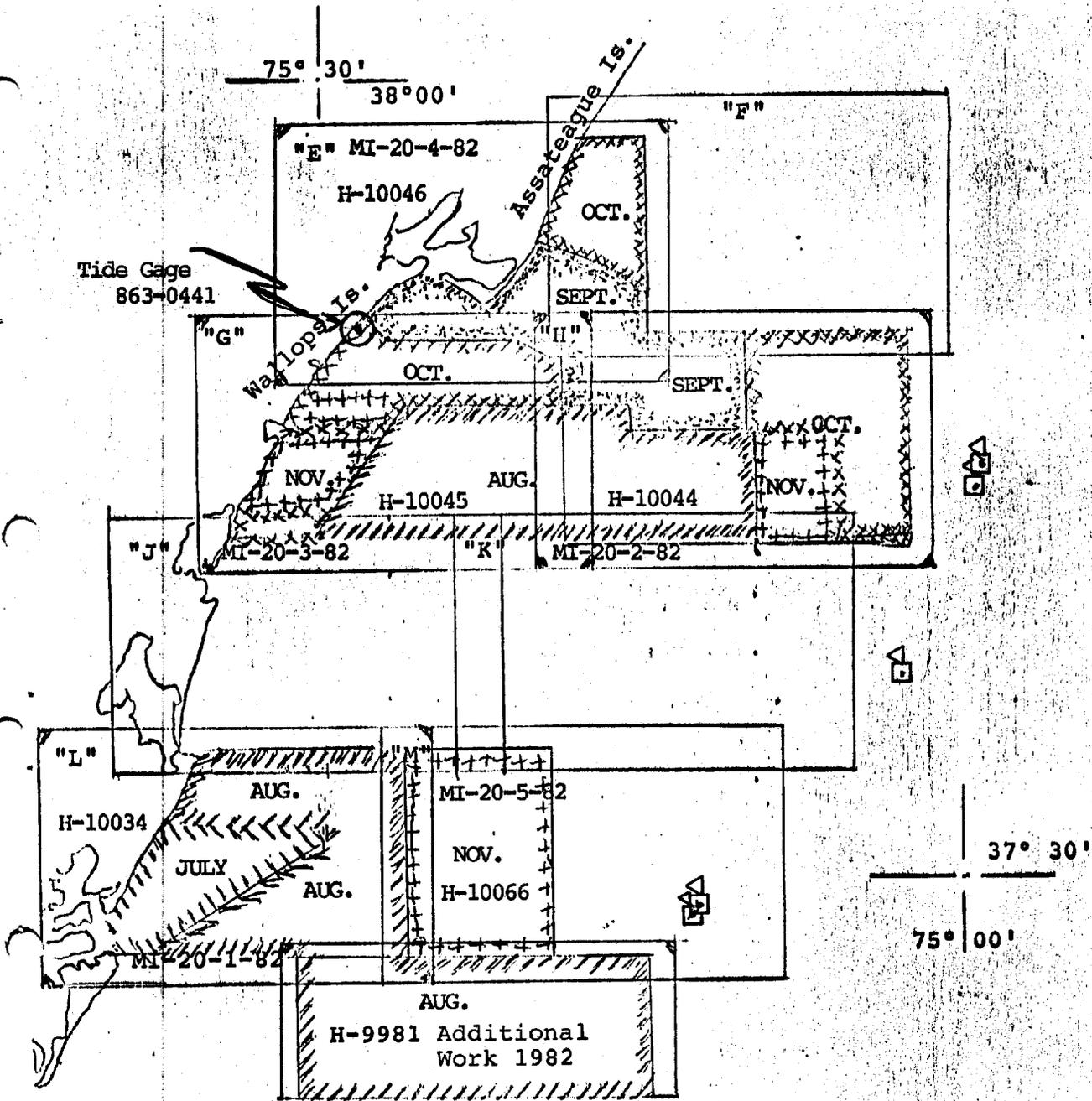
STANDARDS CK'D

10-3-84 C. Loy

UNOIS 10/29/84 M.S.M

4-22-97

SURF 10/29/84 M.S.M



	JULY	AUG.	SEPT.	OCT.	NOV.
-	-	1856.3	525.0	467.8	725.2
-	-	195.4	22.8	47.5	55.0
269.6	587.6	265.1	563.8	222.7	
21	20	18	34.4	20.0	
54	47	38	53	21	
2	1	1	1	-	
-	784.7	271.9	324.8	396.6	
199.6	348.4	220.6	263.0	227.6	

LNM HYDRO (SHIP)
 SNM HYDRO (SHIP)
 LNM HYDRO (LAUNCH)
 SNM HYDRO (LAUNCH)
 BOTTOM SAMPLES
 NANSEN CAST
 MISC., NM (SHIP)
 MISC., NM (LAUNCH)

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

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* FILED WITH ORIGINAL SURVEY DATA

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DESCRIPTIVE REPORT
to accompany
Survey H-10066
(Field No. MI-20-5-82)
Scale 1:20,000, Year 1982
CAPT J. Austin Yeager NOAA
Commanding
NOAA Ship MT MITCHELL

A. PROJECT:

ACCORDING TO

This survey was carried out ~~with~~ Project Instructions OPR-D103-MI-82 issued 5 May 82 and amended by changes 1, 2 and 3 dated 21 June 1982, 07 September 1982 and 10 December 1982 respectively.

B. AREA SURVEYED:

This survey was conducted in the Atlantic Ocean offshore of Parramore Island, Virginia, east of Parramore Banks.

The limits of the survey area are described by connecting the following points in a clockwise manner:

<u>Latitude</u>	<u>Longitude</u>
37°26.5" N	075°20.0' W
37°26.5' N	075°26.0' W
37°34.9' N	075°26.0' W
37°34.9' N	075°20.0' W

This survey was conducted between 6 November 1982 (JD 310) and 9 November 1982 (JD 313).

C. SOUNDING VESESEL:

Soundings for this survey were obtained by the NOAA Ship MT MITCHELL S-222 (Vessel Number 2220). There were no unusual problems encountered.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS: - SEE SECTION ██████████
██████████ 4. J OF THE EVALUATION REPORT.

All soundings were recorded in feet using a skeg mounted transducer located 32.0 meters aft of the antenna (this distance is corrected for by the parameter tape that was used in the offline plot) and the following equipment:

<u>Equipment</u>	<u>Serial Number</u>
Ross Model 5000 Fineline Depth Recorder	1050
Ross Model 6000 Digitizer	1050
Ross Model 4000 Transceiver	1050

All survey records were scanned by trained survey department personnel and checked by the Officer-in-Charge. Significant peaks and deeps that occurred between soundings were inserted and digitizing errors corrected on the electronic corrector tape.

Phase checks were made at frequent intervals. Necessary adjustments were made and noted in the sounding volume and on the fathogram. Departures of the trace from the calibrations due to phase differences were corrected during the scanning process.

*Velocity corrections were obtained from a Nansen cast on 30 October, 1982 (JD 303) at Latitude 37°37.8' N, Longitude 075°02.7' W. All tables and printouts of velocity tapes and the sounding correction abstract are included in Appendix D.

A draft of 13.9 feet was applied to all soundings collected. This draft was determined by subtracting the measured rail to water distance from established rail to transducer height on Julian Day 213. Settlement and squat correctors for the ship were determined on 26 July, 1981 (JD 207) 8 miles off Cape Charles, Virginia. A copy of the field data and settlement and squat correctors obtained is included in the survey support data. The settlement and squat correctors will be applied during final processing phase by OA/CAM3, Processing Division.

This survey was done with predicted tides based on daily predictions at Hampton Roads, Virginia, from the 1982 Tide Table, with tidal zoning to be applied as provided in the project instructions for OPR-D103-M1-82. Smooth tides were requested on 29 November 82 from the Chief of Tides and Water Levels Branch, OA/C23, Rockville Tides Branch.

E. HYDROGRAPHIC SHEETS:

This survey was plotted on four mylar ^Ccomplot roll-plotter sheets by the Hydroplot ^{BED} System on board the MT MITCHELL as follows:

<u>Sheet</u>	<u>Data</u>	<u>Skew</u>
1	Main Scheme (North)	0,21,54
2	X-Lines, splits, Dev., B.S.(North)	0,21,54
3	Main Scheme (South)	0,21,54 ✓
4	X-Lines, splits, Dev., B.S.(South)	0,21,54

This survey was plotted on mylar with grids drawn on by program RK 201. While conducting hydrography, program RK 112 was used with the predicted tide ✓ tape.

The survey was plotted off-line with RK 210 using a master electronic corrector tape and a velocity corrector tape. A predicted tide tape was used off-line to plot the data from JD 310 position 064 to the end of the survey. Soundings on the field sheets have been corrected for draft, predicted tides, initialized and digitized error, ✓ and sound velocity. They are not corrected for settlement, squat, or smooth tides. These correctors will be applied on the final smooth sheet to be plotted by the Atlantic Marine Center, OA/CAM3, Processing Division, Norfolk, VA.

All field records and the following tapes have been forwarded to the Atlantic Marine Center for verification and smooth plotting:

Master Hyperbolic Data Tapes (raw and edited) ✓
 Electronic Corrector Tapes
 Velocity Tapes
 Parameter Tapes
 Signal Tape
 TC/TI Tapes

F. CONTROL STATIONS:

The horizontal control stations used for this survey were:

<u>Signal Number</u>	<u>Name</u>	<u>Latitude</u>	<u>Longitude</u>
100	GRAVITY 1965 (1980)	36°40'31.454" N	075°54'56.471" W
200	BIRD 1909 ; RM5, 1982	37°44'17.414" N	075°53'35"11.904" W ✓
300	JONES 1981	37°53'16.699" N	075°20'31.186" W

All control stations are monumented and were established by Third Order, Class I methods (Station GRAVITY, 1965 was re-established in 1980 by OA/CAM 102, Norfolk, ✓ VA). All control stations were recovered by MT MITCHELL personnel. A listing of stations used for calibration and their geographic positions is included in Appendix F.

G. HYDROGRAPHIC POSITION CONTROL:

An Odom Offshore Hydrotrac System, operating at a frequency of 1718.59 K HZ in the hyperbolic mode, was used to provide positioning control for all hydrography. Hydrotrac Stations were erected and maintained by the ship's personnel. The equipment used and serial numbers are as follows:

<u>Vessel or Shore Stations</u>	<u>Equipment</u>	<u>Model</u>	<u>Serial Number</u>
100 - GRAVITY 1965 (1980)	slave drive unit	257	220
	linear amplifier	74-87	536
200 - BIRD 1909 , RM 5, 1982	master drive unit	257	121
	master linear amplifier	74-87	540
300 - JONES 1981	slave drive unit	257	215
	linear amplifier	74-87	539
MT MITCHELL	receiver	700	326
	sawtooth recorder		8501
	S1 Antenna Coupler		131
	S2 Antenna Coupler		130

Calibrations were done using threepoint sextant fixes with program RK 561. Calibrations were not performed on the survey area through lack of visual control. The abstract of the corrections to the electronic control is included in Appendix E.

H. SHORELINE:

There was no shoreline within the survey limits.

I. CROSSLINES:

Crosslines were run at 45 degree to 90 degree angles to the mainscheme. The 29.2 miles of crosslines amounted to 5.3% of the mainscheme sounding lines. Crosslines agreed with mainscheme as follows: 90% within 1 foot, 99% within 2 feet and 100% within 3 feet.

J. JUNCTIONS: *NO CONTEMPORARIES TO THE NORTH OR EAST. SEE SECTION 5 OF THE EVALUATION REPORT*

This survey junctions with the following surveys:

<u>Area of Junction</u>	<u>Field No.</u>	<u>Reg. No.</u>	<u>Scale</u>	<u>Date</u>	<u>Ship</u>
South	MI 20-7-81	H-9981	1:20,000	1982	2220
East West	MI 20-1-82	H-10034	1:20,000	1982	2220

H-9981 did not overlap this survey since both surveys were conducted in the same year using the same ship and control. There was no shift in contours.

The overlapping junction with H-10034 was excellent, with 85% of the soundings within 1 foot and 100% within 2 feet. There was no shift in the contours.

K. COMPARISON WITH PRIOR SURVEYS: SEE SECTION 6 OF THE EVALUATION REPORT

Presurvey Review Item Number 41 at Latitude $37^{\circ}31'54''$ N and Longitude $075^{\circ}21'36''$ W, reported as a charted obstruction of 43 ft, was an information item. It was developed by Vessel Number 2220 on Julian Day 311 and a least depth of ~~46~~ 42 feet was found on position 411 + 3. This obstruction was not found with 100 meter line spacing. Sufficient bottom coverage to disprove PSR 41 was not obtained. It is recommended to remain on the chart. SOURCE: CL 1083/75
 CONCUR - 42 FT. SOUNDING IS APPROXIMATELY 500 METERS W. OF ITEM - RECOMMEND SIDE SCAN/WIRE DRAG

Always
10/29/84
MSM

Presurvey Review Item Number 987 at Latitude $37^{\circ}32'00''$ N and Longitude $075^{\circ}24'42''$ W, reported as a barge sunk by a submarine on 3/1/42 by ESF (wire drag cleared to 56 feet) was an information item. It was developed by Vessel Number 2220 on Julian Day 311 and a least depth of 69 feet was found on position 1440 + 4. This obstruction was not found with 100 meter line spacing and one crossline. Sufficient bottom coverage was not obtained to disprove PSR 987. It is recommended to remain on the chart. SOURCE: FE-80 WD (1949). CONCUR - RECOMMEND SIDE SCAN/WIRE DRAG

Always
10/29/84
MSM

Prior surveys available for comparison were as follows:

Survey	Scale	Date
H-5715	1:40,000	Jul to Oct, 1934
H-5770	1:40,000	Sep to Oct, 1934
H-5771	1:40,000	July to Aug, 1934
FE-80 WD, (1949)	1:40,000	MAY 1949

Survey H-5770 had 75% of the soundings within 1 foot, 95% within 2 feet and 100% within 3 feet of this survey.

Survey H-5771 had 80% of the soundings within 1 foot, and 100% within 2 feet of this survey.

There was no major change in the bottom contours found in the comparisons.

L. COMPARISON WITH THE CHART SEE SECTION 7 OF THE EVALUATION REPORT

The survey area is covered by the following charts:

Chart Number	Edition	Date	Scale
12210	26	31 Oct 81	1:80,000
12200	34	16 Jan 82	1:416,944

- NOT NECESSARY; AREA COVERED BY LARGER SCALE CHART 12210

The charted depth of 44 feet at Latitude $37^{\circ}31.22'$ N, Longitude $075^{\circ}21.58'$ W has moved 300 meters SSE and has formed a small shoal. - PRESENT SURVEY HAS 49 FOOT DEPTHS IN THE AREA.

The comparison with Chart #12210 showed 60% of the soundings within +/- 1 foot, 85% within 2 feet, 98% within 3 feet, and 100% within 4 feet. All the shoals were found but were altered slightly, perhaps by sand transport or by less accurate positioning equipment on the prior survey. This survey revealed no dangers to navigation.

Comparison with Chart #12200 was excellent with all the soundings agreeing within 1 fathom.

M. ADEQUACY OF THE SURVEY

This survey is considered complete and adequate to supercede prior surveys. ✓

N. AIDS TO NAVIGATION *SEE SECTION 4.8 AND 7.6 OF THE EVALUATION REPORT*

There are no fixed aids to navigation within the survey area. There is one floating aid, Parramore Bank Lighted Whistle Buoy, "10", at the junction with sheet H-10034. It was located by that survey's position number 8991 on Julian Day 231 at $37^{\circ}32'01''$ N, $75^{\circ}25'48''$ W. ✓

O. STATISTICS:

Linear Nautical Miles of Main Scheme Hydrography	407
Linear Nautical Miles of Crosslines	29.2
Linear Nautical Miles of Development	116.2
Total miles of Hydrography	552.4
Total miscellaneous miles	214.8 ✓
Total miles run	767.2
Square Nautical Miles of Hydrography	44.2
Total number of positions	1569
Nansen Casts	1
Bottom Samples	21

P. MISCELLANEOUS:

This survey was completed as far east as Latitude $75^{\circ}20'$ N. The remainder of the area from sheet "M" on the sheet layout dated June 4, 1980 will be surveyed on the 1:40,000 scale surveys (sheets "NN" and "PP"). This change was authorized in Change Number 3 of the Project Instructions. ✓

Q. RECOMMENDATIONS:

R Side scan sonar could be a very effective way to prove or disprove ^Ppresurvey review items when sufficient guidelines and field procedures are developed. ✓

R. AUTOMATED DATA PROCESSING:

The following Hydroplot Programs were used to acquire and process the survey data: ✓

<u>Program Number</u>	<u>Program Name</u>	<u>Version</u>
RK 112	Hyperbolic Real-Time Plot	08/04/81
RK 201	Grid, Signal, and Lattice Plot	04/18/75
RK 561	Geodetic Calibration	02/19/75
RK 330	Data Reformat and Check	05/04/76 ✓
RK 530	Velocity Corrections Computations	05/10/76
AM 602	Extended Line Oriented Editor	05/21/75
PM 360	Electronic Corrector Abstract	02/02/76
RK 210	Hyperbolic Non-Real-Time Plot	02/02/81

S. REFERENCE TO REPORTS

Coast Pilot Report

Respectfully submitted,



Garner R. Yates, Jr., LTJG, NOAA

APPENDIX F
LIST OF STATIONS

SIGNAL TAPE PRINTOUT

SURVEY: - H-10066

VES. NO. 2220

FIELD NO: MI-20-5-82

100	4	36	40	31454	075	54	56471	250	0000	171859
110	4	36	54	116158	075	42	47123	139	0000	000000
120	4	37	23	39409	075	42	31434	139	0000	000000
125	4	37	23	39453	075	42	31515	139	0000	000000
130	0	37	27	12015	075	40	59714	139	0013	000000
131	6	37	27	11947	075	40	59639	139	0015	000000
132	2	37	27	12015	075	40	38565	250	0013	000000
135	4	37	27	39565	075	40	15720	139	0000	000000
140	4	37	29	31700	075	39	48219	139	0000	000000
142	0	37	32	11100	075	37	24750	139	0000	000000
145	6	37	34	33483	075	36	01191	139	0000	000000
146	4	37	34	23555	075	37	63467	139	0000	000000
150	0	37	35	21197	075	36	57542	139	0000	000000
155	4	37	36	21103	075	38	45122	139	0000	000000
160	4	37	37	12105	075	38	52950	139	0000	000000
165	2	37	38	05988	075	35	53860	139	0000	000000
167	4	37	40	21070	075	35	40852	139	0000	000000
170	1	37	41	41837	075	35	11562	139	0000	000000
175	4	37	41	45767	075	36	50225	139	0000	000000
180	5	37	44	16518	075	35	05454	139	0000	000000
200	2	37	44	17414	075	35	11904	250	0000	171859
210	4	37	46	25644	075	33	44864	139	0000	000000
240	5	37	49	00905	075	30	11209	139	0000	000000
250	7	37	49	48629	075	31	22808	139	0000	000000
270	5	37	50	32284	075	28	48887	139	0000	000000
273	4	37	51	08099	075	28	16909	139	0000	000000
280	4	37	52	34534	075	26	38652	250	0000	000000
288	7	37	51	46270	075	22	83968	250	0004	000000
290	0	37	51	48978	075	22	06649	139	0000	000000
291	7	37	51	48918	075	22	06592	250	0006	000000
299	5	37	53	15578	075	28	31626	139	0007	000000
300	0	37	53	16699	075	20	31186	250	0000	171859
310	4	37	54	39797	075	21	22991	139	0000	000000
319	6	37	55	05071	075	19	21586	139	0000	000000
320	4	37	55	09656	075	19	22183	139	0000	000000
321	2	37	55	10324	075	19	22652	250	0006	000000
324	3	37	55	50303	075	18	57172	250	0000	000000
327	3	37	56	40422	075	18	33276	250	0000	000000
330	3	37	57	27186	075	17	56400	250	0000	000000
340	3	37	58	20864	075	17	15574	250	0000	000000
350	3	37	59	10652	075	16	35025	250	0000	000000
370	3	38	00	55525	075	15	17408	139	0000	000000

MASTER SIGNAL TAPE -- NAMES

043
044
045
046
047
048
049

QPR D103-MI-82 DELMARVANCE

10/29/82 42 SIGNALS

- 001 100= GRAVITY, 1980
- 002--110=--SHEGAPEAKE-LIGHT-TOWER
- 003--120=--HOG-ISLAND-COAST-GUARD-LOOKOUT-TOWER
- 004--125=--HOWARD--(MARK-IS-ON-78-FT.-CATWALK-AROUND-TOWER)-(1962)
- 005--130=--LITTLE--(1959)--
- 006--131=--LITTLE-MACHIPONGO-INLET-COAST-GUARD-LOT
- 007--132=--LITTLE-ECC--(1982)--
- 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=--BRAB--(1962)--
- 014--155=--HAMMOCK-VFC--(1933)--
- 015--160=--BURTON-VFC--
- 016--165=--TOMPKINS--(1962)--
- 017--167=--METOMPKIN-INLET-COAST-GUARD-LOT # 152
- 018--170=--FERN--(1962)--
- 019--175=--JOXNES-2--(1934)--
- 020--180=--BIRD--(1909)--
- 021 200= BIRD (RM. 5), 1982
- 022--210=--BUFFON--(1949)--
- 023 240= FLAT (1962)
- 024 250= BARNES (1909)
- 025--270=--WALLOPS-ISLAND--(NEW-NASA-TANK)--
- 026 273= WALLOPS ISLAND NASA METMAST W80, 1980
- 027--280=--EASY-WALLOPS-BEACH-COAST-GUARD-LOT # 3 (NEW TANK) TOWER
- 028--288=--H-8-VA-1978--
- 029--290=--ASSATEAGUE-BEACH-COAST-GUARD-LOOKOUT-TOWER # 150 (1939)
- 030--291=--ASSATEAGUE-BEACH-C6-LOT-ECC--
- 031--299=--ASSATEAGUE-NPS-DOME
- 032 300= JONES, 1981
- 033 310= ASSATEAGUE LIGHTHOUSE (1909)
- 034--319=--STEEL-RM2
- 035--320=--STEEL--(1962)
- 036--321=--STEEL-RM1
- 037--324=--H-7-VA-1978
- 038--327=--H-6-VA-1978
- 039--330=--H-5-VA-1978
- 040--340=--H-4-VA-1978--
- 041--350=--H-3-VA-1978--
- 042--370=--H-2-VA-1978

APPENDIX I
LANDMARKS FOR CHARTS
(There were no landmarks in this survey area) ✓

APPENDIX J
APPROVAL SHEET

APPROVAL SHEET

Date Jan 6, 1983Survey H-10066Field No. MI 20-5-82

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. ✓

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

DATE: February 17, 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): 863-8863 Chesapeake Bay Bridge Tunnel, Virginia

Period: November 6-9, 1982

HYDROGRAPHIC SHEET: H-T0066

OPR: D103

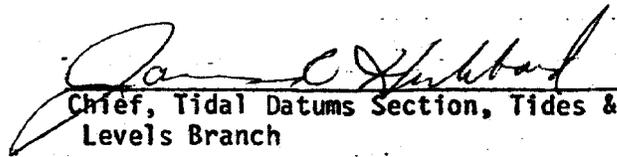
Locality: Offshore Parramore Island, Virginia

Plane of reference (mean lower low water): 24.84 ft.

Height of Mean High Water above Plane of Reference is 2.7 ft.

REMARKS: Recommended Zoning:

Apply -30 minute time correction and x1.38 feet range ratio.


Chief, Tidal Datums Section, Tides & Water
Levels Branch

GEOGRAPHIC NAMES

H-10066

Name on Survey	A	ON CHART NO.	12200	12210	B	ON PREVIOUS SURVEY NO.	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
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ATLANTIC OCEAN (title)																				1	
PARRAMORE BANKS (title)																					2
VIRGINIA (title)																					3
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																					25

Approved

Charles E. Harrington

Chief Geographer - N/C62x5

4 JUNE 1984

HYDROGRAPHIC SURVEY STATISTICS

H-10064

RECORDS ACCOMPANYING SURVEY: To be completed when survey is processed.

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT
SMOOTH SHEET		1	SMOOTH OVERLAYS: POS., ARC, EXCESS		3
DESCRIPTIVE REPORT		1	FIELD SHEETS AND OTHER OVERLAYS		8
DESCRIP- TION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR- GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS
ACCORDIAN FILES	1				
ENVELOPES					3
VOLUMES					1
CANERS				2	
BOXES					

SHORELINE DATA

SHORELINE MAPS(List):

PHOTOBATHYMETRIC MAPS(List):

NOTES TO THE HYDROGRAPHER(List):

SPECIAL REPORTS(List):

NAUTICAL CHARTS(List):

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	EVALUATION	TOTALS
POSITIONS ON SHEET			1548
POSITIONS REVISED	2		2
SOUNDINGS REVISED	146		146
CONTROL STATIONS REVISED			
	TIME - HOURS		
	VERIFICATION	EVALUATION	TOTALS
PRE-PROCESSING EXAMINATION	16	8	24
VERIFICATION OF CONTROL	4		4
VERIFICATION OF POSITIONS	52		52
VERIFICATION OF SOUNDINGS	189		189
VERIFICATION OF JUNCTIONS	4	4	8
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	27		27
COMPARISON WITH PRIOR SURVEYS AND CHARTS		4	4
EVALUATION OF SIDESCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS		2	2
EVALUATION REPORT		44	44
OTHER			
DIGITIZING	5		5
TOTALS	297	62	359
Pre-processing Examination by C.D. MEADOR, F.L. SAUNDERS	Beginning Date 2-11-83	Ending Date 2-15-83	
Verification of Field Data by M.J. STEWART, F.L. SAUNDERS, M.W. HOLLOWAY	Time(Hours) 280	Ending Date 6-5-84	
Verification Check by G.F. TREPETHEN, L.G. CRAM	Time(Hours) 75	Ending Date 6-5-84	
Evaluation and Analysis by P.H. WHITEFIELD	Time(Hours) 54	Ending Date 6-15-84	
Inspection by C.D. MEADOR	Time(Hours) 11	Ending Date 6-13-84	

ATLANTIC MARINE CENTER
EVALUATION REPORT

SURVEY NO.: H-10066

FIELD NO.: MI-20-5-82

Virginia, Atlantic Ocean, East of Parramore Banks

SURVEYED: 6 November through 9 November 1982

SCALE: 1:20,000

PROJECT NO.: OPR-D103-MI-82

SOUNDINGS: Ross Digital Echo Sounder

CONTROL: Odom Offshore
Hydrotrac
(Hyperbolic Mode)

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

Surveyed by.....E. S. Varney
.....P. M. Thomas (B.R.N.)
.....G. R. Yates, Jr.
.....F. W. Rossmann
.....K. P. Peters
.....R. D. Henegar
.....B. L. Coakley
.....D. I. Crews

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

1. INTRODUCTION

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

2. CONTROL AND SHORELINE

- a. The control is adequately described in sections F and G of the Descriptive Report.
- b. There is no shoreline within the area surveyed.

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 be drawn in their entirety. The supplemental thirty-six (36) foot and charted ninety (90) foot curves

were drawn on the smooth sheet. Additional dashed and brown curves were drawn to better show the bottom relief.

c. Development of the bottom configuration and determination of least depths is well done.

4. CONDITION 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 found in section 6.13 of the Project Instructions. The survey was received three and one-half weeks late.

b. A velocity graph was not submitted with the Descriptive Report. The velocity graph used to develop velocity table #12 was from survey H-10034 (1982) which junctions the present survey. Velocity table #12 was not correctly constructed by the field and a new velocity table was made during verification.

c. The hydrographer failed to submit a report on currents or a negative report as per section 8.2.2 of the Project Instructions.

d. The hydrographer failed to locate "Parramore Bank Lighted Whistle Buoy 10", charted in Latitude 37°32'06"N, Longitude 75°25'50"W, reference Light List No. 145, Volume I, in accordance with sections 1.6.5 and 4.5.13.2 of the Hydrographic Manual.

On survey H-10034 (1982) the buoy is referenced at position 8991 (Sounding Vol. 1, page 21) as being 175 meters abeam to port, bearing 167° on the gyro.

On the present survey the buoy was mentioned twice on the raw data printout, year day 311, between positions 401 and 404, as being passed an estimated distance to port/starboard.

Since neither of the above methods is adequate to determine an accurate position, this buoy was not shown on the present survey smooth sheet.

e. The hydrographer failed to make a comparison with prior surveys H-5715 (1934) and FE-80WD (1949).

f. No bottom characteristic was taken on the shoal located in the vicinity of Latitude 37°31'30"N, Longitude 75°22'30"W as required by section 4.5.9.2 of the Hydrographic Manual and section 8.1 of the Project Instructions.

g. No settlement and squat data was submitted with the records for this survey. This information was taken from survey H-10034 (1982) for use on this survey.

h. Neither the original nor copies of the electronic control calibration records were submitted with the field data for this survey.

i. A comparison of echo sounder depth with vertical casts for determination of instrument error was not done as required by section 4.9.5.1.2 of the Hydrographic Manual.

j. A wrong format was used for the velocity corrector tape. A new velocity corrector tape in the proper format was made during verification.

5. JUNCTIONS

H-9981 (1981-82) to the south
H-10034 (1982) to the west

Excellent junctions were made between the present survey and surveys H-9981 (1981-82) and H-10034 (1982).

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

6. COMPARISON WITH PRIOR SURVEYS

a. Hydrographic Surveys

H-5715 (1934) 1:40,000
H-5770 (1934) 1:40,000
H-5771 (1934) 1:40,000

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

Soundings on these prior surveys are generally within plus or minus one (1) to six (6) feet of the present survey depths. The locations of deeps and highs are in general agreement with a slight migration southwest in some areas. Scattered soundings are up to twelve (12) feet shoaler than the present survey.

The differences between the present and prior surveys can be attributed to natural changes, errors in reading the old style combination striker and oscillator fathometer, and inaccuracies in positioning by use of the Radio Acoustic Ranging system and taut-wire-sun azimuth located signal buoys.

The present survey is adequate to supersede these prior surveys in the common area.

b. Wire Drag Survey

FE-80 WD (1949)

There are no conflicts between the present survey depths and the wire drag effective depths.

The wreck of the barge "ALLEGHENY" located in Latitude 37°32.27'N, Longitude 75°24.70'W, with a wire-drag clearance depth of fifty-six (56) feet, should be retained as charted.

7. COMPARISON WITH CHART 12210 (26th Edition, October 31, 1981)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys and needs no further discussion.

Two Presurvey Review Items (numbers 41 and 987) were investigated by the hydrographer and are discussed in section K of the Descriptive Report.

Except where noted above or discussed elsewhere in this report, the present survey is adequate to supersede the charted hydrography in the common area.

b. Aids to Navigation

There is one floating aid to navigation within the area of the present survey (see section 4.d of this Evaluation Report).

8. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the Project Instructions except as noted in section 4 of this Evaluation Report.

9. ADDITIONAL FIELD WORK

This is an excellent basic survey. Recommendations for additional field work on Presurvey Review Items are found in sections K and Q of the Descriptive Report.


Franklin L. Saunders
Cartographic Technician
Verification of Field Data


Richard H. Whitfield
Cartographic Technician
Evaluation and Analysis


Guy F. Trefethen
Senior Cartographic Technician
Verification Check

Inspection Report
H-10066

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

Charles D. Meador

Charles D. Meador
Chief, Evaluation and Analysis
Group
Hydrographic Surveys Branch

David B. MacFarland, Jr.

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

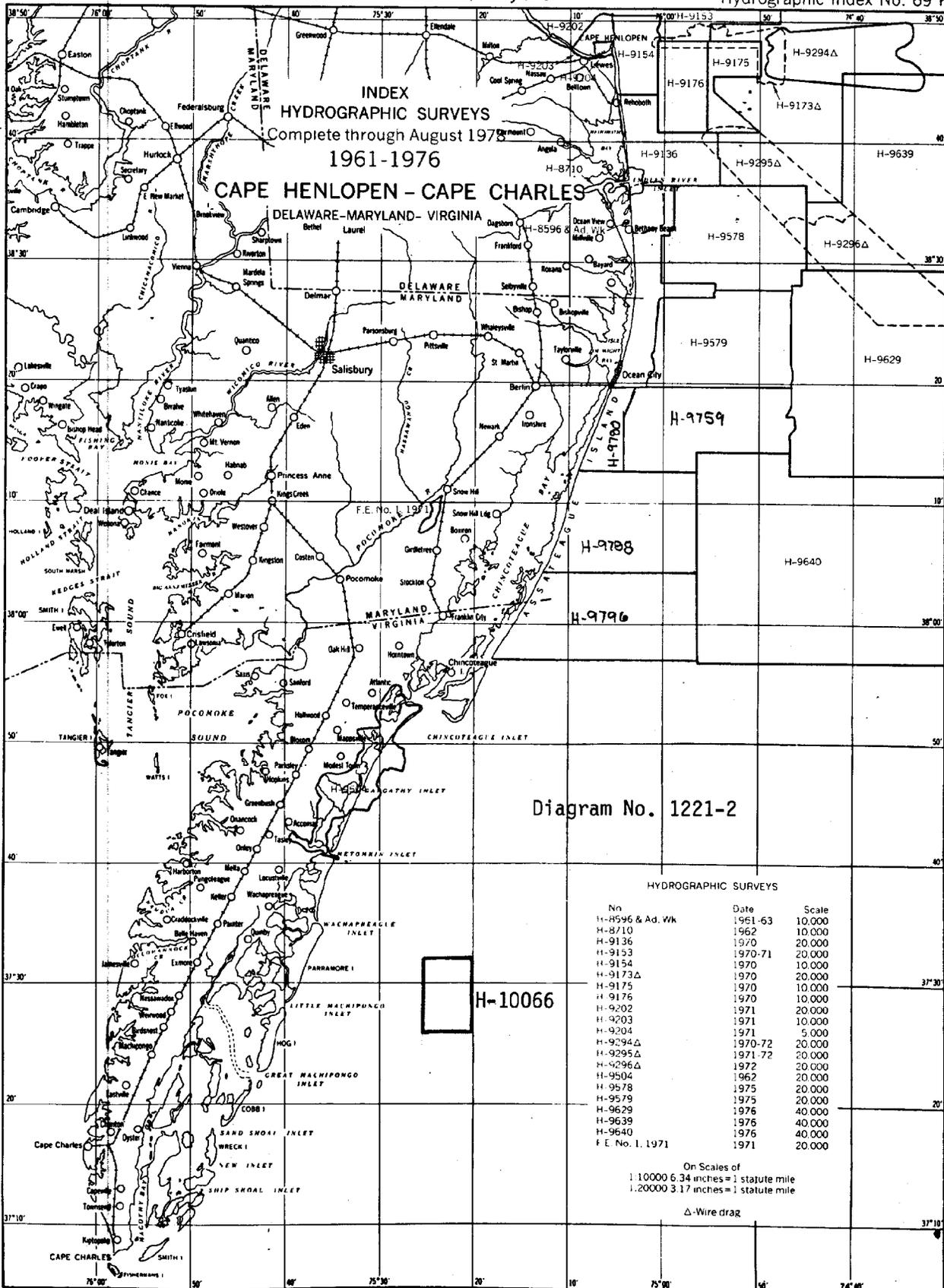
Approved June 15, 1984

Wesley V. Hull

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

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Rockville, Maryland

Hydrographic Index No. 69 K



INDEX
HYDROGRAPHIC SURVEYS
Complete through August 1978
1961-1976

CAPE HENLOPEN - CAPE CHARLES

DELAWARE-MARYLAND-VIRGINIA

Diagram No. 1221-2

HYDROGRAPHIC SURVEYS		
No	Date	Scale
H-8596 & Ad. Vn	1961-63	10,000
H-8710	1962	10,000
H-9136	1970	20,000
H-9153	1970-71	20,000
H-9154	1970	10,000
H-9173Δ	1970	20,000
H-9175	1970	10,000
H-9176	1970	10,000
H-9202	1971	20,000
H-9203	1971	10,000
H-9204	1971	5,000
H-9294Δ	1970-72	20,000
H-9295Δ	1971-72	20,000
H-9296Δ	1972	20,000
H-9504	1962	20,000
H-9578	1975	20,000
H-9579	1975	20,000
H-9629	1976	40,000
H-9639	1976	40,000
H-9640	1976	40,000
F.E. No. 1. 1971	1971	20,000

On Scales of
1:10000 6.34 inches = 1 statute mile
1:20000 3.17 inches = 1 statute mile

Δ-Wire drag

